

HARVARD MEDICAL ALUMNI BULLETIN

Spring, 1963

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"All that is necessary for the triumph of evil is
for good men to do nothing..."



ALUMNI DAY

Friday, May 31, 1963

8:00 a.m. - 5:00 p.m.

REGISTRATION

BUILDING A

9:30 a.m.

BUSINESS MEETING

D Amphitheatre

10:00 a.m. - 12:00 noon

MORNING PROGRAM

D Amphitheatre

CALVIN H. PLIMPTON '43A, *Moderator*
President, Amherst College

Speakers

ASHTON GRAYBIEL '30
Director of Research of the U.S. Naval School of Aviation Medicine
BEHAVIOR IN A ROTATING ENVIRONMENT

* * *

JOHN FRANKLIN ENDERS, Ph.D.
University Professor
ONCOGENIC VIRUSES

* * *

JAMES PAYSON DIXON '43B
President, Antioch College
UNDERGRADUATE ORIGINS OF PHYSICIANS

* * *

SHIELDS WARREN '23
Professor of Pathology at the New England Deaconess Hospital
ATOMS, MEDICINE AND POLITICS

* * *

LANGDON PARSONS '27
Director of Alumni Relations
FOR A STRONGER TOMORROW

12:00 noon

The Presentation of the 25th Reunion Gift to the School
President of the Class of 1938

12:30 p.m.

BUFFET LUNCHEON

Longwood Quadrangle

2:15 - 4:15 p.m.

AFTERNOON SYMPOSIUM

D Amphitheatre

RECENT EXCITEMENT ABOUT MOLECULES IN MEDICINE
BERT L. VALLEE, *Chairman*

* * *

CHRISTIAN B. ANFENSEN, Ph.D.
Professor of Biological Chemistry
THE IMPACT OF BIOCHEMICAL GENETICS ON MEDICINE

PAUL C. ZAMECNIK, M.D. '36
Collis P. Huntington Professor of Oncologic Medicine
HOW PROTEINS ARE SYNTHESIZED

BERT L. VALLEE, M.D.
Associate Professor of Medicine
HOW PROTEINS FUNCTION AS ENZYMES

WARREN E. C. WACKER, M.D.
Assistant Professor of Medicine
HOW ENZYMES ARE USED TO UNDERSTAND AND DIAGNOSE DISEASE

* * *

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HARVARD MEDICAL ALUMNI BULLETIN

VOL. 37

SPRING 1963

NO. 3

The Cover: The cover caption, taken from a quote by Edmund Burke, speaks to all mankind, all professions. The cover story, beginning on page 20, is by Joost Sluis '51, Director, Northern California Branch, Christian Anti-Communism Crusade — entitled, "An Alumnus and the Christian Anti-Communism Crusade."

cover design by egr

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Advertising: Milton C. Paige, Jr., 8 Fenway

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LETTERS

A Dialogue on Medicine and Money

Since A Program for Harvard Medicine was formally launched in 1960, Dean Berry has received several inquiries as to the meaning of the phrase, "Harvard Medicine." Recently, a physician wrote to Dr. Berry suggesting that "there is but one medicine all over the world, as it was in the days of Hippocrates." He added, "I wonder if the money changers have not come into our temple."

The following is the Dean's reply:
Dear _____:

With respect to our use of the shorthand expression, "Harvard Medicine," words have a way through the years of taking on meaning by the power of association. Thus, I submit, we find in the phrase many of our revered associations with our medical giants of the past and the traditions they built. As you point out, all medicine is associated with Hippocrates — and so, too, is Harvard Medicine. All of which does not stop us at Harvard from trying to create and to live up to a traditional standard of excellence of our own — our richest heritage.

Let me return for a moment to my adjectival use of the word short-

hand in the first sentence of the present letter. We needed an all-embracing term to describe the widely ranging efforts being made by the Harvard Medical School and the twenty hospitals associated with it for teaching at one level or another. (For simplicity, I shall omit mention of the many other institutions also related to the Medical School.) Efforts to avoid the limitations imposed by emphasizing one or several parts when the emphasis should be on the whole, led to the phrase "Harvard Medicine."

May I take exception also to another of your statements — "I wonder if the money changers have not come into our temple." I wonder sometimes whether those who revere the Harvard Medical School do not forget the roles that the great philanthropists have played throughout the ages. Such men provided the sustenance without which the Faculty of Medicine could not have built the traditions of Harvard Medicine. The Morgans and the Rockefellers made their contributions in their way as did the Folins and Peabodys in theirs — even as did Hopkins and Osler. The wonder at Harvard is that so many have done so much to make possible the associations you "cherish as one of your privileged experiences."

Have I helped to clarify for you the usage we have adopted? Please let me know. Meanwhile, thanks for writing.

GEORGE P. BERRY, DEAN
Harvard Medical School

The Gay Lecture

To the Editor:

I have just read the powerful Gay Lecture prepared by Erik Holm Erikson, published in the Winter Issue of your *Bulletin*. I am hoping that you will have sufficient calls for reprints to have some for distribution.

Did you know that Erikson made a notable contribution which is hidden in: *Symposium on the Healthy Personality*, edited by Milton Senn (Josiah Macy, Jr., Foundation, 1950).

Harvard Medical School is getting up a powerful head of steam and will really forge ahead in the years to come. Congratulations.

S. HALCUIIT MOORE, JR., '35
Dallas, Texas

A Physician's Duty

To the Editor:

At the present time when the overriding importance of the contributions of basic science in furthering the understanding of disease is being recognized clearly by so many, the cry

is often heard that such emphasis on science will destroy the humanitarian principles of medicine. Those who recognize this alleged danger appear to believe firmly and honestly that the acquisition of new knowledge leading to a better understanding crowds out all that has gone before, whether it be in the realm of science or humanity. Thus, new understanding of disease, based on knowledge gained in the current revolution in biology, cannot help but gnaw away at the humanitarian aspects of medicine to render the physician a "scientific" automaton devoted to his "experiments" but not to the care of his patients.

The proponents of this view are many and vocal, moreover they voice their objections in the form of a crusade having as its intent the preservation of the ethical principles of medicine. As a result, those who do not hold this view often find themselves in an exposed, defensive position. Especially when the premise is accepted and rebutted simply with the argument that medicine is not yet adequately scientific. The fact is, of course, that the premise itself is specious. The two fundamental parts of medicine, the dedication to the care of one's fellow man and the acquisition of the knowledge and understanding to accomplish this formidable task, do not displace one another. It is the duty of a physician to cherish his patients, to be kind to them, to protect them, and to bear their burdens, and it is also his *sworn* duty to gain all the knowledge and understanding, humanly possible, to better his ability to heal their ills. Sympathy cannot overcome ignorance any more than science can wipe away the grief of a bereaved parent.

We as physicians must delight in the acquisition of knowledge that helps us treat our patients, and we cannot help but gain humility and a better understanding of our dedication to our fellow men whenever the present knowledge fails to help us accomplish this task. There is no schism in medicine — our duty is to serve our patients.

WARREN E. C. WACKER, M.D.
Boston

BOOK REVIEW

TEXTBOOK OF SURGERY, Richard Warren. W. B. Saunders Co., Philadelphia and London, 1963. 1397 pages.

Although as Dr. Warren so frankly states in his Preface, "A host of weary doctors have felt that 'too much is written already,'" nevertheless this reviewer agrees that there will always be a vacuum in surgery as long as surgical research and progress continue. It is unlikely that such progress will ever cease, and, therefore, there will always be need for clear presentation of new data for the student of surgery.

Warren's *Textbook of Surgery* "fills the vacuum" in a number of areas but particularly in its first several chapters dealing with the physiology and pathophysiology of the kidney and the lung, and biochemical derangements in general that result from renal failure, pulmonary decompensation and shock.

Although certain technical advances have been made in areas of surgery, such as otolaryngology and cardiovascular disease, nevertheless the major advances in knowledge in the past ten years appear to have been made in these areas of disordered human physiology and biochemistry. Such disorders of the internal milieu are applicable to surgery

in general and patients in general, crossing over the boundaries that divide the surgical specialties. These advances have led to an increasing understanding of derangements of pulmonary exchange, of cardiac rhythm, of renal function, of those factors that affect the tone of the arterial tree, of disorders of metabolism and the human biochemical balance in general. This textbook presents the new information well, and it is in these areas that the book makes its greatest contribution.

The remainder of the book deals with the various surgical divisions. There are excellent chapters on nutrition and metabolism. The major advances in the field of peripheral vascular disease and of congenital and acquired heart disease are clearly reviewed, with excellent figures. The other systems of the body are presented and appear to be well covered.

As these various surgical systems are reviewed, the student of surgery will find a strong clinical orientation, not always encountered in a textbook of surgery; and yet, as Dr. Warren states in his preface, only by understanding treatment for a condition can the real meaning of an abnormality be fully appreciated.

JOHN R. BROOKS '43B



photo by Dave Lawlor

Spring swooped down on the quadrangle on "first-day-of-Spring" eve in the form of nine inches (so the weather bureau reported) of snow. Quickly come, faster go — the editors had barely time to snap this picture before the sun turned March's lion into a lamb.

Along the Perimeter

- + Biomathematics Laboratory
- + New Appointments
- + Promotions
- + Program News
- + Dunham Lectures

The Times Were On Our Side

"Though at the beginning it did not seem so, one can see now that the times were on our side." Expressed by Dr. Anthony F. Bartholomay at the January 14 dedication of the Biomathematics Laboratory of the division of mathematical biology, this thought sums up the rise of this relatively new field. Director of the new division and its laboratory, and first of the speakers at the dedication, Dr. Bartholomay presented a brief history of mathematical biology at Harvard, touching on the factors that aided in its progress. At the Medical School the way had been opened by the establishment of the Biophysics Laboratory by Dr. Bert L. Vallee in 1953; Dr. Bartholomay joined the lab soon after its organization. In 1958, Dr. Bartholomay taught a course in mathematical biology at the Harvard School of Public Health, as a member of the department of biostatistics; and in 1961, tutorials in the field were begun at the Medical School in response to requests by several medical students. It is indicative of the rising interest in the mathematical and theoretical aspects of medicine that related work was begun — and continues to be done — by persons at the Massachusetts General Hospital, the Harvard School of Dental Medicine, Harvard's department of biology, and other groups in the area.

Parallel to this increased activity, and partly responsible for it, has been the recent progress in computers. In May, 1962, the Harvard Computing Center was established in Cambridge through the efforts of a committee which included Dr. Bartholomay as representative of the Medical School. It is hoped that the two computer centers will profit from one another in many ways. The IBM 1620 installed in the Biomathematics Laboratory was selected partly because it promises to be particularly compatible with the IBM 7090 at the Center. While the 7090 is ideal for very large and complex problems and will doubtless be used by the new laboratory when such problems arise, there are certain advantages peculiar to the 1620 which is generally referred to as a "scientific computer." Being more accessible and simpler to understand and operate, it is better for the smaller problems and, most important, better for teaching and research purposes. In addition, many types of extremely complicated problems are more easily solved if begun on the smaller system and transferred to the 7090 for completion.

The Biomathematics Laboratory was financed by grants from the National Institutes of Health, and its development during the last few years has been greatly assisted by grants to Dr. Bartholomay from the Rockefeller Foundation and the Howard Hughes Institute, for which Dr. Bartholomay is an investigator. In addition to director Bartholomay, staff members consist of Dr. Giorgio Segré, on leave from the University of Turin, Italy, and Dr. James Defares, on leave from the University of Leyden, Holland. They are assisted by Dr. Robert Craig, in clinical research, and Dr. Elizabeth Shuhany, in mathematical research. Miss Yuling Li is manager of the

computing facilities. Special consultants to the division are Dr. Hugo Muench, former chairman of the department of biostatistics at the School of Public Health and now at the Lemuel Shattuck Hospital, and Dr. Ralph M. Johanson, affiliated with Sperry Rand Corporation and former professor of mathematics at Boston University. Dr. Bartholomay emphasized the encouragement and support provided by IBM, with whom the new division looks forward to continued association.

In a news story released just prior to the dedication, Dr. Bartholomay stressed that the new division and laboratory represent an experimental project, "... for before a computer can be useful, biologists and mathematicians must translate medical and biological problems into mathematical formulae . . . (which) . . . to be well done depend on . . . the mathematicians' interpretation of medical and biological data and the reliability of medical records." Second speaker Dr. George V. Thorn, physician-in-chief of the Peter Bent Brigham Hospital, has confidence, however, that the new division will be of great importance to the Hospital and patient care — in advancing automation for improved efficiency in the processing of patients and their records; in preparing recently uncovered knowledge for more immediate clinical use; and in analyzing data for diagnosis.

Dr. George P. Berry, Dean of the Harvard Medical School, added in his remarks that the new division will also be of great help to the Medical School and spoke at some length of the importance of the computer which, he said, is not merely an extension of man's senses — as is the electron microscope — but of his intellect. Dr. Berry also read a telegram from the Hughes Institute.

Mr. Frank A. Engel, Jr., manager of the Harvard Computing Center, dwelt largely on the importance of the Center and talked of its relationship to the new laboratory. He made the interesting point that at the Medical School, as at the College, the computer may well be found helpful in lightening the load of tedious work that plagues even the specialist, that the computer has many more uses than are commonly ascribed to it.

The main speaker of the afternoon was Dr. Nicholas Rashevsky, whom Dr. Bartholomay introduced as the outstanding leader in the modern era of mathematical biology. Not only is Dr. Rashevsky largely responsible for the nurturing of mathematical biology during the past quarter-century, but he showed himself to be an extremely colorful and vigorous speaker. As a preface to his remarks he apologized for the fact that it would be necessary, in speaking of "Mathematical Biology, its Past, Present, and Future," to use the first personal pronoun more than he liked. Dr. Rashevsky then began with the adage that there is nothing new under the sun. When he began his work, he said, he was considered by many to be dangerously progressive, although the field of mathematical biology was new only to the uninformed. Related work appeared as early as 1760, when a paper on the mathematical theory of blood circulation was presented by the great mathematician, L. Euler.

Dr. Rashevsky was greatly influenced in his work by the *Elements of Physical Biology* (now entitled *Elements of Mathematical Biology*), written by Alfred Lotka and published in 1925. In 1934, he joined the University of Chicago, where he became chairman of the Committee of Mathematical Biology, the first formal teaching group organized in the field. He soon gathered about him a number of brilliant scientists, at whose hands the young science began to develop at a "rapid pace." Many of these men are now working for the U. S. government, having been "borrowed during the war and never returned." He added that "not all of our students, however, were lost in this fashion," and new men entered the field after the war.

In 1939, Dr. Rashevsky established his journal, *The Bulletin of Mathematical Biophysics*, of which he is still editor and which has now reached international proportions, doing much to spread interest in mathematical biology. In general, said Dr. Rashevsky, new students

of the field have been created in two ways: by the influence of his committee, members of which have left Chicago to study and teach at other universities, and by "spontaneous generation." As an example of the latter, Dr. Rashevsky pointed to Dr. Bartholomay, who, he believed, "has not only never been in Chicago, but has never even been *near* Chicago." (Dr. Bartholomay has confirmed this point.)

In the past two years there have been several symposia on mathematical biology, most of which have been headed either by Dr. Rashevsky or Dr. Bartholomay, and four or five more are now in the planning stage. As for the future of the field, Dr. Rashevsky feels that it is limitless and that, although it is still awaiting its Newton and its Einstein, "they are coming and may already be in our midst."

"I do not wish you success," ended Dr. Rashevsky, "because I know that success will be yours."

Faculty Appointments

Dr. Glaser



Robert J. Glaser

Returning to the Harvard Medical area after many years in Missouri and Colorado is Dr. Robert J. Glaser, recently appointed Professor of Social Medicine at Harvard University and President of Affiliated Hospitals Center, Inc. Born at St. Louis in 1918, Dr. Glaser received his S.B. degree from Harvard College, his M.D. degree *magna cum laude* from the Medical School, Class of 1943B.

After completing his resident training at the Barnes Hospital in St. Louis, he was associated with the Washington University Medical School — as assistant professor of medicine, associate dean of the faculty of medicine, associate professor of medicine, and head of the division of immunology. In 1957 Dr. Glaser was invited to the University of Colorado School of Medicine where he has been serving as dean and professor of medicine.

Recognized as one of the nation's most imaginative and successful medical leaders, he has been active in the Association of American Medical Colleges through which he has helped achieve a more balanced understanding of the problems confronting basic scientists in medical schools and the clinicians responsible for patient care in teaching hospitals. Dr. Glaser served the Association as assistant secretary, chairman of the Teaching Institutes and the Committee on Education and Research. He became vice-president of the Executive Council in 1959.

Throughout his professional life he has devoted much of his research activity to rheumatic diseases and has been consultant to several hospitals and organizations concerned with these diseases. Dr. Glaser is presently a member of the National Advisory Council in Health Research Facilities of the USPHS.

Affiliated Hospitals Center, Inc., is *not* a part of A Program for Harvard Medicine, the \$58-million fund to strengthen the Faculty of Medicine in the Medical School and the Associated Teaching Hospitals. The lone "bricks and mortar" structure in the Program is the Francis A. Countway Library of Medicine. Affiliated Hospitals Center, Inc., is an agreement among a group of Harvard teaching hospitals (Boston Lying-in, The Children's Hospital Medical Center, Free Hospital for Women, Massachusetts Eye and Ear Infirmary, Peter Bent Brigham Hospital and Robert Breck Brigham Hospital) for the purpose of planning a new hospital complex in the vicinity of the Medical School. For the Massachusetts Eye and Ear Infirmary the affiliation will not mean a move from its present location, but an extension of its services. The proposed complex will provide needed space, modernization, and a vastly improved environment for patient care, education, and research. As president, Dr. Glaser will be responsible for coordination of the extensive planning involved in the project.

Dr. Glaser's wife is also a physician; she received her M.D. degree in 1947 from the Washington University School of Medicine and has been serving as assistant professor in pediatrics and pediatrician to the division of child psychology at the University of Colorado Medical Center. The Glasers have three children.

Howard H. Hiatt Appointed First Herrman Ludwig Blumgart Professor of Medicine

Howard H. Hiatt '48 has been appointed the first Herrman Ludwig Blumgart Professor of Medicine at Harvard, to serve simultaneously as Physician-in-Chief at the Beth Israel Hospital.

Dr. Hiatt, although only 37, has already compiled a distinguished record of scientific investigation and is held in high regard by his colleagues as a perceptive and competent physician and skillful teacher.

Presently, in the medical research laboratories of the department of medicine at the Beth Israel Hospital and in the department of bacteriology and immunology at the Medical School, Dr. Hiatt seeks to determine the ways by which mechanisms that control growth in normal mammalian cells are deranged in cancer. His interest involves the relationships among "messenger RNA" and the protein-synthesizing machinery of cells. The phrase — messenger RNA (ribonucleic acid) — derives from the



Dr. Hiatt

belief that this class of nucleic acids is responsible for the transmission of genetic information.

The ultimate objective of Dr. Hiatt's research is the application of knowledge to the understanding and management of cancer in man. Writing in this area as well as in other areas of research, Dr. Hiatt has contributed over 50 scientific publications.

Prior to his appointment to the tenure professorship at Harvard, Dr. Hiatt was associate in medical research at the Beth Israel Hospital and assistant professor of medicine at the Medical School. While on leave from the Hospital and School in 1960-61, he spent a year at the Pasteur Institute in Paris working with Dr. François Gros in the laboratories of Dr. Jacques Monod. His studies with Dr. Monod were carried on under a fellowship from The Commonwealth Fund.

Dr. Hiatt received his M.D. degree *cum laude* from Harvard. Before joining the staff of the Medical School and the Beth Israel Hospital in 1955, Dr. Hiatt was a research fellow in medicine at New York Hospital and Cornell Medical College and a commissioned officer in the U. S. Public Health Service.

At Harvard, Dr. Hiatt has been an American Cancer Society Scholar in Cancer Research (1958-59), and in 1959 was one of the nation's outstanding young medical scientists to receive a Lederle Medical Faculty Award.

The Herrman Ludwig Blumgart Professorship of Medicine at Harvard was established through the contributions of the colleagues, patients, hospital trustees

and friends of Dr. Blumgart who — upon retirement in 1962 as Physician-in-Chief at the Beth Israel Hospital — became professor of medicine, *Emeritus*, at Harvard. At the Medical School and Hospital which he served for 35 years, Dr. Blumgart set an example for 4000 students as the “complete physician,” characterized by Dr. Berry as one “. . . who with integrity, wisdom, compassion and understanding, made of the art and science of medicine a continuum.”

Dr. Blumgart continues to serve the Medical School as a Special Assistant to the Dean and as a member of the Admissions Committee.

Oliver Cope Appointed Professor of Surgery

Oliver Cope '28, whose work on endocrine malfunctions and thermal burns is known throughout the world, has been appointed professor of surgery at Harvard Medical School. Affiliated with the Medical School and the Massachusetts General Hospital for almost 35 years, Dr. Cope's effectiveness as a teacher of surgery has been affirmed by the generations of medical

Dr. Cope



students and surgical residents who have studied under him. Dr. George P. Berry, Dean of the Medical School, describes him as a “dedicated teacher who conveys, by his very insistence, the importance of his subject. . . . By his character and altruistic behavior he has exerted a favorable influence on those around him.”

Deeply interested in medical education, Dr. Cope has served the Harvard Medical School on numerous faculty and administrative committees. At present he is chairman of Harvard's *ad hoc* Committee on Clinical Teaching. He is concerned with teaching standards across the country and has counseled such organizations as the National Board of Medical Examiners and the American Board of Surgery. Various committees of the American Medical Association have repeatedly solicited his views. In 1953 he was invited to address the First World Conference on Medical Education in London, which was held under the auspices of the World Medical Association and the World Health Organization.

Born in Germantown, Pennsylvania, Dr. Cope attended Germantown Friends' School and spent one year at Haverford College before transferring to Harvard. He majored in chemistry and received his A. B. degree in 1923, entering Harvard Medical School in the fall of that year. Before going on to his third year of medical school Dr. Cope spent a year in China as a newspaper correspondent. The high point of this experience was an exclusive interview with Generalissimo Chiang Kai-shek aboard a coastal boat.

In 1926 Dr. Cope returned to the Medical School and received his M.D. degree in 1928, then took his intern and resident training at the Massachusetts General Hospital. In 1933 he received a Moseley Traveling Fellowship from the Harvard Medical School which enabled him to study endocrine physiology for a year in England under Sir Henry Dale.

As may be seen from his early studies with Dale, Dr. Cope has long been interested in diseases involving the endocrine glands. He has advanced the understanding of such diseases and in some cases has originated and refined surgical methods of treatment. Particularly outstanding is his work on the thyroid and parathyroid glands. Working with Harvard's department of medicine at the Massachusetts General Hospital, Dr. Cope devised an effective form of treatment for hyperparathyroidism, a contribution which, in Dr. Berry's words, “stands as a brilliant chapter in modern surgical history.”

Although primarily an endocrine surgeon, Dr. Cope is even more widely known for his original approach to the treatment of burns which grew out of his significant work following the disastrous Coconut Grove fire of 1942. A year prior to the Boston nightclub fire Dr. Cope had been persuaded by the U. S. Office of Scientific Research and Development to undertake a study of burn therapy. When the tragedy struck, therefore, he had already devised an advanced, though simplified, method for the local treatment of burns. This treatment,

standard today, greatly influenced the management of burns during World War II.

Dr. Cope has continued to make contributions to the study of thermal burns throughout the years and has devoted much research to the effect of burns on the intricate balance of the endocrine system. He has also done extensive work on the surgical treatment of ulcers and, more recently, on the lymphatic system as it relates to surgical practices.

National and international recognition have come to him in many forms. In 1950, he was awarded the Doctor Honoris Causa by the Toulouse University, France, and in the spring of 1962, he became president of the American Surgical Association.

In addition to his posts at Harvard and the Massachusetts General Hospital, Dr. Cope serves as consultant in surgery to the Massachusetts Eye and Ear Infirmary, South County Hospital in Wakefield, R. I., and the Tewksbury State Hospital and Infirmary in Tewksbury, Massachusetts.

Louis K. Diamond, New Professor of Pediatrics

Recently appointed professor of pediatrics at Harvard Medical School, Louis K. Diamond '27 is best known for his work in the tracing of several blood diseases of the newborn to an incompatibility in the parents' Rh blood factors and his development of the standard methods of their diagnosis and treatment. Dr. Diamond's early work dealing with infant blood diseases — in particular, his description of erythroblastosis fetalis, characterized by the destruction of red blood cells — set the stage for this major contribution. Soon after the Rh factor was discovered in 1940, Dr. Diamond found that the child of an Rh negative mother and an Rh positive father often absorbs from the mother alien antibodies that destroy its red blood cells shortly before or after birth. His procedure of exchange transfusion in such cases annually saves the lives of some 10,000 babies in the United States alone and prevents the occurrence of an equal number of cases of cerebral palsy.

To extend this knowledge of Rh typing to obstetrical and pediatric practice and to blood transfusion, Dr. Diamond established the Blood Grouping Laboratory at the Children's Hospital under joint sponsorship by four other Boston hospitals. In a short period of time, the Laboratory has made a number of important contributions to the knowledge of human blood groups.

Also interested in anemia, Dr. Diamond has developed successful methods of treatment for several genres of the disease. Acquired aplastic anemia, he



Dr. Diamond

found, responds to the male hormone testosterone, while congenital hypoplastic anemia responds to intensive steroid therapy. A type of anemia caused by dietary deficiencies has been the object of intense investigation by Dr. Diamond in recent years, and in 1960 he traveled to the Middle East, Central Africa, South America, Central America and Mexico, under a Rockefeller Foundation grant to study children with the type of anemia which often accompanies kwashiorkor.

In addition, Dr. Diamond has recently developed a deep interest in human genetics as it pertains to blood diseases and has been instrumental in establishing a laboratory for the clinical, biochemical and chromosomal study of human genetics. In August of 1962, he received a grant from the John A. Hartford Foundation to continue his investigations of hereditary blood diseases. Referring to Dr. Diamond's studies of anemia and genetics, Dr. Berry has noted that his "interests in pediatric hematology are taking him more and more broadly into the socio-economic and cultural problems of the newly developing countries and deeper and deeper into the biochemical activities of the macromolecules of the cell."

A native of New York City, Dr. Diamond received his A.B. and M.D. degrees from Harvard University in 1923 and 1927. Since completing his internship and residency at The Children's Hospital, Dr. Diamond has been almost continuously affiliated with the Harvard Medical School and The Children's Hospital, where he

is currently Associate Chief of the Medical Service, hematologist, and director of the blood bank. For two years — 1948-1950 — he was in Washington as the Medical Director of the National Blood Program of the American Red Cross, and in addition to his posts at The Children's Hospital he serves as consultant to the New England Hospital, Boston Lying-in Hospital, Massachusetts General Hospital, Beth Israel Hospital, and Wesson Maternity Hospital.

Author of two books and over 100 scientific papers, in 1946 Dr. Diamond received the Mead Johnson Award of the American Academy of Pediatrics for outstanding pediatric research; in 1951, the Carlos J. Finlay Gold Medal of the Government of Cuba; and in 1959, the Award of Merit from the Dutch Red Cross. A member of numerous professional and scientific organizations, he was formerly president of the New England Pediatrics Society and vice-president of the International Society for Blood Transfusion.

Clement A. Smith

Dr. Clement A. Smith, whose teaching and research dealing with the practical clinical problems of newborn infants has brought him international acclaim, has been named Professor of Pediatrics at Harvard, with offices and laboratories at the Boston Lying-in Hospital.

Dr. Smith is Chairman of the Executive Committee of the Department of Pediatrics at the Medical School; he has served as Associate Professor of Pediatrics since 1949. With the exception of two years, Dr. Smith has been a member of Harvard's medical staff and faculty since 1931.

For his contributions to basic research in the causes of prematurity and the care of premature infants, Dr. Smith became, in 1957, the first recipient of the Arvo Ylppö Medal honoring the founder of the modern practice of pediatrics in Finland. In the same year Dr. Smith was Visiting Professor of Pediatrics at Queen's College, Dundee, of the University of St. Andrew's in Scotland.

Noting Dr. Smith's interest in the newborn, Dr. Berry said,

He approaches the field from the point of view of a physiologically trained physician, with metabolic and biochemical interests. He recognized early that the major hazards to the newborn infant compromise the establishment of adequate respiratory function. His inquiries have led him into studies of fetal hemoglobin and iron metabolism, the metabolism of water and electrolytes, maternal-infant nutritional relationships and, more recently, into an investigation of those disturbances in the circulation that may have an important bearing on diseases causing breathing difficulties in the newborn.

Dr. Smith was born in Ann Arbor, Michigan. He received the A.B. (1923), A.M. (1925) and M.D. (1928)



Dr. Smith

degrees from the University of Michigan and in 1958 was awarded the Sc.D. (honorary) by Colby College.

He is Physician to The Children's Hospital, Medical Advisor, Directory for Mothers' Milk in Boston, and Consultant to the Children's Medical Service. His contributions to scientific literature, numbering in excess of 100, include the scholarly text, *The Physiology of the Newborn Infant*, now in its third edition.

In recognition of Dr. Smith's outstanding research in infant nutrition the American Academy of Pediatrics awarded him the Borden Award in 1961. In the same year he was named editor of *Pediatrics*, the official publication of the Academy. Dr. Smith also serves as a member of the editorial boards of *Excerpta Medica* (Section VII) and *Biologia Neonatorum*.

Dr. Smith's appointment to a full professorship is another step toward the strengthening of the Harvard Medical School's two departments of pediatrics. One department is located at the MGH, the other at The Children's Hospital. The latter also encompasses the academic activities of the pediatric service at the Beth Israel Hospital.

"Harvard regards pediatrics," Dr. Berry states, "not so much as a specialty as a division of the whole field of medicine. It is concerned with the health of the individual from the time of conception throughout the period of growth and development. Its interests are closely linked with those of obstetrics in responsibility for the child

during the important phases of intrauterine life and of transition and adjustment to life in the external world, and merge into those of internal medicine and gynecology as the adolescent becomes an adult. In the medical curriculum pediatrics provides a particularly good medium through which to illustrate the importance of genetics, the influence of the processes of growth and development upon physiologic functions and responses to disease and to therapy, the continuity and totality of optimal medical care and the increasing opportunities for the prevention of disease and disability."

Claude A. Villee

Dr. Claude A. Villee, a biological chemist who studies embryonic and placental tissues in a research program designed to add to our understanding of the phenomena of cell development and differentiation, has been promoted to full professorial rank in the Faculty of Medicine. The promotion of Dr. Villee to professor of biological chemistry with offices and laboratories at the Boston Lying-in Hospital was effective April 1.

Dr. Villee has discovered that estrogens stimulate an enzyme (estrogen-stimulable nucleotide transhydrogenase)

Dr. Villee



that releases, in the human female, materials essential to cell growth. As the enzyme is found in tissue of the mammary gland, Dr. Villee and his associates, under assignment from the Cancer Chemotherapy Unit of the National Cancer Institute, U. S. Department of Health, Education and Welfare, are engaged in testing a number of naturally occurring as well as synthetic substances that could limit the activity of the enzyme and thus be effective in treating cancer of the breast.

Dr. Villee is active in both the preclinical and clinical areas of the teaching program at the Harvard Medical School and is chairman of the Board of Tutors for medical students.

Among Dr. Villee's contributions to the scientific press, which number more than 180, is his extremely popular college textbook, *Biology*, now in its fourth edition.

Born in Lancaster, Pa., Dr. Villee received the B.S. degree in 1937 from Franklin and Marshall College, the Ph.D. degree in 1941 from the University of California, and the A.M. (honorary) degree in 1957 from Harvard. His first appointment at Harvard, as instructor in biological chemistry in 1945, followed a summer's work at the Woods Hole Marine Biological Laboratory.

During the year 1949-50, Dr. Villee was a Guggenheim Fellow, working with Professor Lindstrom-Lang at the Carlsberg Laboratory, Copenhagen, Denmark. His later studies of embryonic tissues were carried on in 1956, 1958, and 1962, at the Karolinska Institute Hospital, Stockholm, Sweden. He is currently a consultant to the National Science Foundation and chairman of the Development of Sciences Biology Panel, NIH.

Honors accorded Dr. Villee include receipt of the Ciba Foundation Award for Research on Aging (1956) and the Rubin Award of the Society for Sterility and Fertility (1957).

Faculty Appointments and Promotions

LUIGI GORINI, Associate Professor of Bacteriology and Immunology.

ULLRICH G. TREDELENBERG, Associate Professor of Pharmacology.

CARL KUPFER, Assistant Professor of Ophthalmology.

THORNTON BROWN '40, Associate Clinical Professor of Orthopedic Surgery.

CHARLES D. COOK '44, Associate Clinical Professor of Pediatrics.

HENRY H. BREWSTER '38, Assistant Clinical Professor of Psychiatry.

CARL C. JOHNSON '38, Assistant Clinical Professor of Ophthalmology.

11 members of the teaching staff of the Harvard Medical School have been promoted to faculty rank:

DR. STANLEY J. ADELSTEIN '53, Associate in Anatomy and Cook Fellow in Radiology.

DR. WILLIAM G. AUSTEN '55, Associate in Surgery with offices and laboratories at the Massachusetts General Hospital.

DR. DONALD T. DUBIN, Associate in Bacteriology and Immunology.

DR. SIDNEY FUTTERMAN, Associate in Biological Chemistry in the Department of Ophthalmology, Massachusetts Eye and Ear Infirmary.

DR. HOWARD GOLDFINE, Associate in Bacteriology and Immunology.

DR. HENRY M. GOODMAN Ph.D., '60, Associate in Physiology.

DR. BERNARD KLIMAN '55, Associate in Medicine with offices and laboratory at the Massachusetts General Hospital.

DR. SIMEON LOCKE, Associate in Neurology.

DR. HIROSHI NIKAI, Associate in Bacteriology and Immunology with office and laboratory at the Massachusetts General Hospital.

DR. WILLIAM W. MONTGOMERY, Clinical Associate in Otolaryngology with offices and laboratory at the Massachusetts Eye and Ear Infirmary.

DR. GEORGE H. WYSHAK D.M.D., HSDM, '56, Clinical Associate in Dental Medicine.

Harvard Medical Chorus to Present Three Spring Concerts

The success of the Christmas concert program of the Harvard Medical Chorus promises to be repeated this spring. One of the Christmas concerts was given at the Rotunda of the Museum of Fine Arts and has led to an invitation to sing there again on May 5, at 3:30 p.m. In addition, the Chorus has the honor to be the first choral group to sing at the Loeb Drama Center in Cambridge on the preceding Sunday — April 28, at 8:30 p.m. The Chorus will also present a special concert at the Fogg Museum for the Friends of the Fogg.

Music of the baroque and classical periods will predominate in the spring program. The numbers include "Die sieben Worte Jesu Christi am Kreuz" by Schütz, Bach's Cantata #118, "O Jesu Christ, meins Lebens Licht," "Absalom fili mi," by Josquin duPrès, and Michael Haydn's "Tribulationes." Representing the 20th century will be Vaughan Williams' "O Clap Your Hands" (Psalm 47). Some of these numbers will include brass accompaniment, and the double octet will sing several additional pieces. Admission to these concerts will be free.

Program Appointments

Leadership appointments to the Alumni Advance Gift effort of the Program for Harvard Medicine:

The appointment as National Alumni Chairman of **CLAUDE E. FORKNER** '26, Clinical Professor of Medicine at Cornell University Medical College and attending physician at the New York Hospital, has been announced by General Chairman Ridley Watts. Long active in alumni affairs, Dr. Forkner was a member of the alumni council (1954-57) and President of the Harvard Medical Society of New York, 1957-58.



Dr. Forkner

JOHN H. LAWRENCE, '30, Professor of Medical Physics at the University of California, has been appointed Western District Chairman.

ROBERT M. STECHER, '23, Clinical Professor of Medicine at Western Reserve University, has accepted appointment as Central District Chairman, and is responsible for an area including 18 midwest and south central states.

RUSSEL H. PATTERSON, '18, Professor of Clinical Surgery, *Emeritus*, Cornell University Medical College, will serve as Chairman for the Eastern District of the United States.

Assisting Dr. Stecher as Alumni Chairman for the Chicago area is **RICHARD B. CAPPS**, '31, Associate Clinical Professor of Medicine at the University of Illinois College of Medicine.

DOUGLAS DONALD, '18, Professor of Clinical Medicine, *Emeritus*, Wayne State University College of Medicine, has been named Detroit Alumni Chairman. He is also serving the Program as Chairman of the Detroit Friends of Harvard Medicine Committee.

HOWARD ULFELDER, '36, Joe Vincent Meigs Professor of Gynecology at Harvard and Chief of Staff, Vincent Memorial Hospital, has assumed the Boston Chairmanship and will work closely with Dr. Patterson.

Program for Harvard Medicine Report

A Program for Harvard Medicine has received three more sizeable — and largely unrestricted — gifts: from The Richard King Mellon Foundation of Pittsburgh; from Mrs. Gilbert Verney of Greenwich, Connecticut; and from Mr. John Factor of Beverly Hills, California.

The Mellon grant of \$100,000 is completely unrestricted and is a significant departure from the Foundation's past practice of concentrating its support in the

Pittsburgh area — in particular, the University of Pittsburgh Medical School. The gift to the Program was apparently prompted by the fact that twenty-four of the Pittsburgh faculty — including the dean of the medical school — received an important part of their education at Harvard. Mrs. Verney's contribution, also \$100,000, is to be used to support teaching and research in the basic sciences.

The department of neurology at the Medical School particularly benefits from Mr. Factor's gift of \$250,000. It is to be used to establish a fund to support teaching and research in neurology, and the income may be applied wherever the promise of advance in the field seems greatest. In announcing the gift, general chairman Ridley Watts emphasized that the grant will enable Harvard to pursue the fundamental study of the central nervous system which is the essential first step in understanding and preventing mental abnormalities.

Dr. Max F. Perutz Named Dunham Lecturer for 1962-63

The 1962 Nobel Laureate in Chemistry, Dr. Max F. Perutz, has been named Dunham Lecturer at the Harvard Medical School for the academic year, 1962-63. Director of Britain's Medical Research Council Unit for Molecular Biology at Cambridge University, he will speak May 13, 15, and 17, on the "Structure of Proteins."

A British subject, Dr. Perutz was born in Vienna in 1914 and completed his undergraduate training there

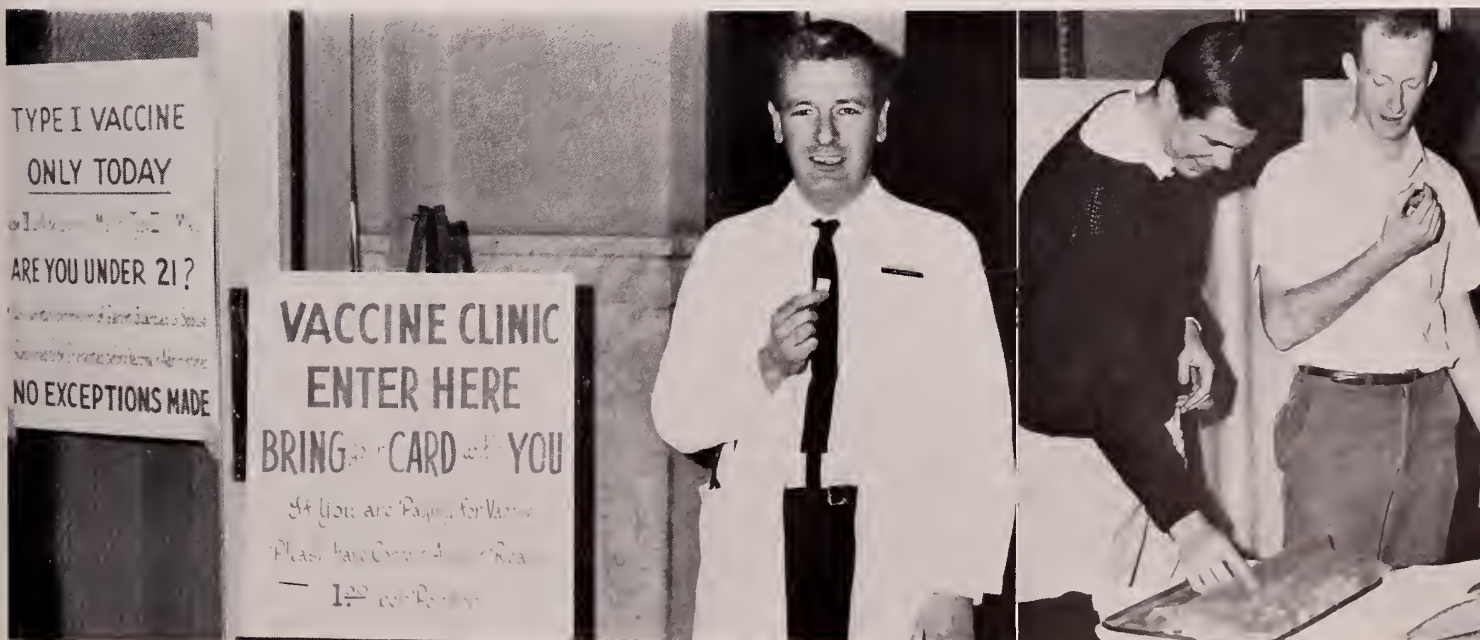
before emigrating to England in 1936. In 1940 he received his Ph.D. degree at Cambridge, and in 1954 he was elected a Fellow of the Royal Society.

Dr. Perutz and a member of his department at Cambridge, Dr. John C. Kendrew, shared the 1962 Nobel Prize in Chemistry for "their work on the three-dimensional structure of hemoglobin and myoglobin." Dr. Perutz' molecular "picture" of hemoglobin represents almost 25 years of intensive research at Cambridge University's Cavendish Laboratory — research begun just after his arrival in England.

Established 40 years ago, the Edward K. Dunham Lectureship for the Promotion of the Medical Sciences honors the memory of a graduate of Harvard Medical School, class of 1886, and is dedicated to the promotion of "the bonds of fellowship and understanding between students and investigators in this and foreign countries." Lecturers are selected from eminent investigators and teachers in one of the branches of the medical sciences or the basic sciences that contribute to the advance of the medical sciences. The Dunham Lecture Committee, presently headed by Dr. Bernard D. Davis, Adele Lehman Professor, and head of the department of bacteriology and immunology at Harvard, has brought 38 lecturers to Harvard — 13 from England; seven from Germany; three each from France, South America, and the United States; two from Sweden; and one each from Holland, Norway, Belgium, Denmark, Australia, Canada, and Austria. Dr. Perutz is the tenth Nobel Laureate to deliver the lectures, two of the others being Dr. William Einthoven, who developed the electrocardiogram, and Sir Frederick G. Hopkins, credited with the discovery of the growth-stimulating vitamins.

Students (right) undergoing rigors of Sabin polio vaccine, as demonstrated at left by Dr. D. A. Tucker, Director of Harvard Medical Area Health Service.

photo by Herman Goslyn



Inside HMS:



How To Succeed In Internship Exams Without Really Trying

While the heyday of such hectic journals as *Confidential* magazine and the *Philadelphia National Enquirer* has waned, it seems to me that in the yet persistent twilight of sensational traditions there is still time "to tell all" about certain of the medical internship "exams" in Boston. Not even Kahlil Gibran has caught the flavour of these exercises and "frustalized"¹ them for posterity; certainly, as effete reminders of the obscurities in medicine, they deserve good-humored frustalization. It is fair to state that many of the Boston hospitals — in fact 66% of the three which immediately come to mind — have replaced the melodrama of the "exam" with interviews oriented along lines of personality analysis which, in the main, tend to be more genteel.

Thirty-three per cent of these hospitals, however, persists in engendering a unique question-and-no-answer attitude which is *traditional* and accepted with genuine good humor by those who are examined, at least those in the Boston area. In a recent issue of *Clinical Research*,² on the other hand, Victor McKusick suggested that out-of-towners take a dim view of questions relating to the contemporary craze of total-body analysis. This, I am afraid, reflects badly on the out-of-towners, who fail to respond good-humoredly to these situations and thus end up interning elsewhere.

Typically, the examining situation consists of several teams, each of which has a dimly-lighted room to

itself where each student will spend a quarter-hour in dreamy contemplation of imponderables — such as, "Why do tophi form in the ears? As opposed to the nose, that is." Cleverly, twice as many students are invited to appear at a given hour as there are places in the team rotation, so that an immediate uproar ensues among the aggressive students for places on the first rotation; the less aggressive are shoved to the rear of the meeting hall and served no coffee and no doughnuts by white-coated secretaries. It is this group which will have to wait several hours while the first rotation is being interviewed, and the various waiting individuals occupy themselves in fitful slumber, wandering about the hospital or watching the paroxysmal door-openings of the team rooms as classmates burst forth smiling to themselves, and laughing about surface tension formulae for alveolar fluids.

Occasionally a secretary announces in the meeting hall that everything is on schedule, acknowledging the subtle applause with a deft curtsy. She is usually superseded by an older secretary in a longer white coat who announces that everything is a little behind schedule, and she is in turn superseded by an even older secretary who states that some interviewing teams have not even seen their first applicants yet because they are fighting over who will ask the first numbing question. (Laughter) She announces importantly that no lunch will be served in the dining room (or elsewhere) to the interviewees.



Frequently a member of the first rotation is dragged by a secretary through the meeting hall to another recess in the hospital where a momentary vacancy has been created in one of the team rooms by the good-natured peripheral vascular collapse of a student asked to discuss the tubers in tuberous sclerosis. On passing through he waves to friends and acquaintances and says it is not nearly so bad as everyone says.

Ultimately the sweaty first rotation returns to the Central Place and gathers in its greatcoats, smiling all the while about Rickettsial diseases of the East Coast, and stopping for no coffee and no doughnuts in the hallway where the white-coated secretaries are closeted. It is now the turn of the second rotation, although several of the interviewing teams have not yet seen a student because they are off in the library arguing a point about frustalized inheritance in the hereditary lipodystrophies.

In the second rotation — to interviewer and interviewee alike — the experience is little more than a continuum of smiling faces, humid palms and secretaries' urgings to speed things up, except for the psychiatric interview: here a leaden-eyed physician detachedly asks three times why the interviewee has decided to go into medicine, while a pen noisily scratches a note pad behind a Chinese screen to the psychiatrist's left. An alternate psychiatrist has been dispatched to team number four, which, during the first rotation, was found to provoke the

heartiest laughter among students and team-members alike. A favorite sally involved asking for a detailed diagram of the urea cycle and was a hit with everyone.

"As a feather is wafted downward from an eagle in his flight," the affair had drawn to a close, although whether it had really drawn to a close was a moot point for one team was still isolated in the house officers' reading room, arguing whether or not raw ceruloplasmin interfered with Huckabee's method for determining lactic acid levels,³ but failing to interview a single applicant.

The realization that great gaps exist in personal knowledge occurs each day to the honest student and physician; the pointing out during internship exams that small hiatuses exist can be accepted gracefully, as I laughingly explained to a secretary when I left; and she smiled good-naturedly and told me candidly that I was going to end up interning elsewhere.

PEPPER DAVIS '63

Cartoon by TOM DOHERTY

¹"Frustalized," meaning to be crystallized in a *forme fruste* sort of way. See *Harv. Med. Alumni Bull.* 37, no. 2 (Winter, 1963), p. 18.

²*Clinical Research* 10:370 (1962).

³*Journal of Clinical Investigation* 37:244 (1958).



From the Finland Station:

Dr. Paul I. Yakovlev

Amid the death throes of the Russian aristocracy and the rise of the "intelligentsia," Dr. Paul Ivan Yakovlev was born in the province of Bielorussia in 1894. His mother's family had been of the old upper class; his paternal great-grandfather was a military surgeon — "little better than a barber" in those days. Dr. Yakovlev's father continued the family's military tradition only until his father died, and when his wife also died, he purchased a farm.

At the age of nine, when his father died, Dr. Yakovlev went to live with his aunt in Wilno. At the Classical Gymnasium there he met the physician who inspired him to go into medicine. Setting aside an early interest in philology and history, he entered the Military Medical Academy at Leningrad in 1914.

In the winter of 1919 Leningrad was besieged by the "Whites" and Finns, famine, and epidemics of "Spanish flu" and typhus. Because of these chaotic conditions the class of

1920 at the Academy was to graduate six months ahead of schedule — on December 25, 1919; on December 26, Dr. Yakovlev received his diploma. In the afternoon of December 27, he and a classmate put on cotton padded jackets over several layers of extra clothes and stuffed their pockets with a few "tsarist" bills, chunks of black bread, some salted lard, and a bottle of lab alcohol. Carrying only small satchels, they walked to the Finland Station, at which Lenin had arrived from Germany only two years before.

Police inspection forced them from car to car and finally off the rear platform of the train. They reached the frozen gulf of Finland by nightfall and began the 15-mile trek across the ice. Lost in the darkness and the monotony of the frozen seascape they stumbled upon a Russian outpost. Probing searchlights periodically forced them to flop down in the snow, wrapped in their sheets, and they narrowly avoided arrest by a sentry. They spent the next day in a barn, huddled in a couple of empty cement barrels, noticed only by a small dog. Dr. Yakovlev fondly remembers "that fraternal mutt who was apparently as exclusively interested in his private business as we were then in ours." The next day they arrived in Finland.

Dr. Yakovlev applied for a visa to Berlin, stating his intention to study there with Dr. H. Oppenheim. A few weeks later his application was curtly refused because he had made it on "false pretenses": the great neurologist had been dead for two years — a fact which had not leaked through the "iron curtain." Dr. Yakovlev then applied for a visa to Paris. To survive the following weeks of red tape, he worked on the docks in Helsinki, sorting heaps of wet and dry matches.

In early April, 1920, he arrived in London. His characteristic curiosity and enthusiasm undulled by his virtually penniless condition, he set out at once to "see the city" and happened upon the British-Russian Brotherhood Society. For writing an account of conditions in Russia he was paid about £80, which carried him until his arrival in Paris in May.

Working evenings and studying under Professor Pierre Marie at l'Hospice de la Salpêtrière and Dr. F. J. Babinski at l'Hospice de la Pitié, he received his M.D. degree from the University of Paris in 1925. Dr. Yakovlev had hoped to return to his homeland "after the dust had settled," but "the 'iron curtain' had become impenetrable for me." An American friend — Dr. William L. Harris — helped to

obtain for him a passport *extra quota* to the United States — "on the grounds of 'special professional qualifications' which I must admit were flimsy indeed."

After practicing for about six months in Providence, R. I., Dr. Yakovlev met Dr. Stanley Cobb who, in October, 1925, hired him to survey foreign medical bibliography for a monograph on epilepsy being prepared by him and the late Dr. William G. Lennox. (Dr. Yakovlev read several languages and spoke "a bookish sort" of English — "though it was a long, long time before I could tell a joke . . .") He also served in the outpatient neurology clinic at the Boston City Hospital, and through Drs. Cobb and Lennox he became, in 1926, the "liaison man" between Harvard's neurological unit at City Hospital and the Monson State Hospital for epileptics at Palmer, Mass. He remained at Monson until 1936, except for 1931-32, when he studied under Professor M. A. Minkowski at Zurich. On his return from Switzerland he was married to Mary K. McQuaid, a secretary at Monson.

Four years later Dr. Yakovlev became the director of laboratories at the Metropolitan State Hospital in Waltham, Mass., and organized post-graduate seminars in the neurological sciences for psychiatrists. After publication of the "Collected Lectures of the Metropolitan Seminars" of 1941-42 under the auspices of the Rockefeller Foundation, these seminars were emulated by many hospitals. Not only did they provide a much-needed study opportunity for doctors in isolated areas, but because of Dr. Yakovlev's particular concentration, they stimulated new interest in the structure and function of the brain.

Dr. Yakovlev was clinical director of research laboratories at the Walter E. Fernald School in Waltham from 1938 to 1947, when he became director of research and training at the Connecticut State Hospital. He was also made associate clinical professor of neurology at Yale and attending neurologist to the outpatient clinic at Grace-New Haven Community Hospital.

At these various mental hospitals Dr. Yakovlev lived with "hundreds of sick people who were my patients, while I was *by vocation* their 'neurologist.' When some of them came to die, I would do autopsies and study their brains '*by avocation*,' if one would wish to put it thus." He consequently had the opportunity to search for the "structural substrata"

of long-standing behavioral disorders, and at Fernald he began his collection of whole brain serial sections.

Dr. Yakovlev returned to Boston in 1951 — to the part-time position of director of the Psychiatric Training Faculty of Massachusetts, Inc., just organized by the Massachusetts Department of Mental Health and the deans' committee of the three Boston medical schools. He also joined Harvard's neurological unit at Boston City Hospital as assistant clinical professor of neurology and continued his work with whole brain sections in Building C at the Medical School.

In 1956 he left the Training Faculty to become associate clinical professor of neuropathology at Harvard and curator of the Warren Anatomical Museum. During the next five years Dr. Yakovlev greatly enlarged the neurological collections; many visitors were drawn by the various rotating exhibits he introduced. Always striving for esthetic appeal in displays, he once had the unwieldy statue of Hermes moved the length of the museum to find just the proper place for it.

Dr. Yakovlev's artistic sense is not limited to a "good eye," however. He illustrates his papers and lectures; in informal seminars he scribbles diagrams on anything that is available — even the back of his 1957 appointment to clinical professor. (When he is driving, he is likely to make sweeping drawings in the air, to the consternation of his passengers.)

As a hobby, Dr. Yakovlev makes ink drawings and woodcuts and improvements at his summer camp on Bare Hill Pond at Harvard, Mass., where he retreats to the simple, outdoor life he loves. "Long before Kennedy," he says, "I was very fond of hiking." He has "lost a few friends" by filling them with shashlik and red wine and then hiking them around the pond. Even now that he has moved from the third to the fifth floor of Building A, Dr. Yakovlev scorns the elevator and takes all five flights of stairs two steps at a time, leaving younger colleagues far behind.

Under the auspices of the USPHS exchange mission program Dr. Yakovlev returned to Russia for the first time in the fall of 1958. Uniquely able to perceive the many changes, he noticed particularly the very clean streets, especially in Moscow, which he remembered as an "oriental bazaar with rather casual municipal attention." Of course, "human nature is always the same": there was the taxi driver who pointed to a policeman and sternly

prevented Dr. Yakovlev from emptying his pipe out of the window — until they had rounded a corner. (Dr. Yakovlev is never without his pipe — except when he has momentarily mislaid it. After a meal he will begin searching absently for his treasured companion, his conversation becoming increasingly disjointed and ceasing altogether if it continues to evade him.)

He was most impressed by the differences in the Russian language. The whole tone of the language has been altered by the disappearance of the old courtesies and flowery embellishments. (A hostess in the hotel said that she had "heard that kind of Russian before" — spoken by her grandmother.) The great variety of dialects has also been leveled out.

Although he became clinical professor *Emeritus* in 1961, Dr. Yakovlev seems no less busy. He is mainly involved in a collaborative project supported by the National Institute of Disease and Blindness, Perinatal Branch, which seeks to clarify the processes of human reproduction and child development through the study of thousands of pregnancies and offspring.

Dr. Yakovlev is investigating the organization of anatomical connections between the thalamus and the cerebral cortex in man, studying autopsy cases of persons who have had brain operations to relieve pain or some motor or mental disorder. A related project involves the study and development of this type of surgery.

A fourth project seeks to discover the relationship of structural to behavioral maturation through a study of the process of myelination of brain fibres.

Because animal brains must often be used in the study of the human brain, it is essential to discover how they all differ from the brain of man. This problem is connected with Dr. Yakovlev's concept of the "stereodynamic organization of the nervous system." The concept proposes that there are recognizable three 3-dimensional space-referred spheres of motility — "visceral," "emotional," and "transactional" — each sphere being represented in the three concentric zones of the forebrain and the neuraxis of vertebrates. The innermost zone is concerned with the motility of "visceration" which, on the whole, is very much alike in all vertebrates. The intermediate zone pertains to the motility of outward expression of visceral states or emotions — hunger, rage, fear, pleasure, and distress — and differs from one species to another according to differences in bodily evo-

lution (face, extremities, body wall). The outermost zone — the cerebral cortex — is concerned with the motility of the effective transaction with the environment. This zone is, of course, uniquely developed in man who is able constantly to improve on his modes of transaction and so becomes increasingly less dependent on his environment, while "a beaver builds dams today as he has built them for thousands of years and so remains dependent on the running brooks to which his whole life is bound."

All these studies are made possible by the collection of human and animal whole brain serial sections Dr. Yakovlev has accumulated over the past 30 years. Unique in the United States and open to scientists all over the world, it includes the brains of over 600 individuals and "tons and tons of glass." The collection has been the wellspring for about 40 others; a medical school "hears that there is an odd character at Harvard who slices thin the brains" and sends for spare sections. Dr. Yakovlev modestly calls his collection "a minor thing, of course; but big things are built of little things."

Referring to the film, "Face of Excellence," Dr. Yakovlev commented to Dr. Berry that "if mine is a 'face of excellence,' then I am afraid the film might not live up to its title. I never imagined I could look such a sourpuss." His skepticism, however, is apparently not shared by his colleagues. As Dr. Derek Denny-Brown wrote to Dr. Berry in 1951: "His studies are of as much interest to neuroanatomy, pediatric neurology, and psychiatry, as they are to neurology . . . Dr. Yakovlev is one of those few individuals who can be described as a catalyst."

Other indications of his reputation are the Max Weinstein Award, presented to him in 1955 by the United Cerebral Palsy Association, his election in 1962 as president of the Society of Biological Psychiatry, and the lecture series he has been asked to give at various medical centers.

Looking back over the many years he has been in this country, Dr. Yakovlev says that he came, "not to 'get rich quick,' nor even to get rich, but to take advantage of the opportunities in becoming a learned neurologist. At first I would not settle for anything less than a 'great' neurologist, but as the years went by, I came to be content with becoming an 'honest-to-goodness' neurologist — and never mind the 'great.'"

LUCY DICKINSON
Editorial Assistant



The Peter Bent Brigham Hospital as seen from Brigham Circle.

DIAGNOSIS DEFERRED

Brigham Jubilees

January, the month for looking backward and forward at the same time — a function for which Janus was admirably adapted, anatomically — is traditionally a month for the starting of new enterprises and sometimes for the ending of old ones. Consonant with this custom the *Bulletin's* relatively esteemed rival across the fens came into publication in January, 1812, and has so far resisted all attempts at termination. More flexible, because of its weekly schedule, if less erudite than the *Bulletin*, it may have the first if not the last word on some subjects more suitably covered in these pages, and so it is in the present instance.

The *New England Journal of Medicine* has already called editorial attention to the fact that on January 27, just fifty years ago, the Peter Bent

Brigham Hospital opened its doors across the street from the marble edifices that house the Harvard Medical School and admitted as its first patient Mrs. Mary Agnes Turner of Roxbury.

The Brigham, as indicated by its transviatic proximity to the School and in line with other, equally academic considerations, had been planned and was developed as a true university hospital and has maintained that distinctive attribute ever since. In this relation, our journalistic colleague insists, it has by no means replaced the Massachusetts General Hospital, the Boston City Hospital and the various special-purpose hospitals that make up the Harvard teaching community, "but has rather been an invaluable addition to the family, complementing them all."

The Hospital, during its half

century of service, has cared for some 500,000 patients — a little lightning calculation places the average at about 10,000 a year. It has witnessed the development of much of Harvey Cushing's special contributions to surgery of the brain and has added its share to the control of pernicious anemia, the refinements of open-heart surgery, the understanding of hormonal activity, the design of the artificial kidney and the transplantation of the true one.

The founding of the Hospital was typical of many similar episodes in the country that has at times been referred to as the land of boundless opportunity. Peter Bent Brigham, one of 9 children of a poor but virtuous family in Bakersfield, Vermont, came to Boston in the early years of the last century — as Dick Whittington went down with his cat to London — and there amassed in the restaurant and real estate businesses what was in those days a considerable fortune. One source of tidy profit, the *New Eng. J. Med.* avers, no doubt on good authority, was his practice of cutting a pie into six instead of five wedges. Although Boston officials naturally sought his advice on civic matters, possibly related to the cutting of melons, it has not been reported that he ever became lord mayor of the city or even aspired to that office.

An ardent abolitionist and a bachelor, Mr. Brigham originally intended to leave his fortune to the cause of emancipation. The Civil War having apparently accomplished that objective, however, he left over a million dollars, on his death in 1877, "for the care of sick persons in indigent circumstances residing in the county of Suffolk;" canny as B. Franklin, he stipulated that the bequest was first to be invested for twenty-five years. At the end of that period it had increased to more than \$4,000,000, and a corporation was formed to plan and build the hospital, an enterprise to which ten years was cautiously devoted. Although the institution flung wide its doors in January, 1913, for the benefit of Mrs.

Turner, the actual observance of its golden jubilee will take place in what is usually the merrier month of May.

Lest the presence in Boston of two separate and distinct Brigham hospitals, each associated with the Harvard Common Medical Market, continue to cause personality cleavages among the uninformed, it may now be revealed that Robert Breck Brigham, whose name is attached to the other Brigham hospital on its eminence adjacent to the Harvard complex, was the nephew of Peter. In 1842, at the age of sixteen, he had wended his solitary way on foot from Bakersfield to Boston, and found grim employment opening oysters — strange occupation for a tight-lipped Vermonter, reared in a region so remote from the usual haunts of oysters. From such toil may have come a premonition that sometime the world, too, would become his oyster. For he soon entered the restaurant business in the service of his uncle, acquired his own establishment after an ap-

prenticeship of scarcely more than ten years, and prospered as had his avuncular relative.

It was Robert, who, in 1860, established Brigham's restaurant on Washington Street and, in 1882, built Brigham's Hotel in the rear of it. In the 1870's his sister, Elizabeth Fay Brigham, joined him. Also possessing the Brigham touch, she, too, became wealthy in her own name, and on her own demise in 1909 left a substantial legacy to her brother's eleemosynary project.

This plan, it became known on his death in 1900, was "the establishment and maintenance of a hospital for destitute victims of chronic disease," and to this object he had dedicated his substantial fortune. Chartered in 1903, a year after the incorporation of the Peter Bent Brigham Hospital, the Robert Breck Brigham was also a decade aborning, admitting its first patient in April, 1914, and now anticipating its own jubilee a twelvemonth hence.

Peter
Bent
Brigham



AN ALUMNUS AND THE ANTI.

by Joost Sluis, '51

FIVE YEARS OF STUDY at MIT, followed by a Harvard medical education, may at first glance hardly seem appropriate preparation for a career largely devoted to the work of the Christian Anti-Communism Crusade. This view was colorfully expressed by a colleague in a letter to the *Berkeley Gazette* on October 11, 1961, prior to an address which I gave on the theory and philosophy of Communism, as a participant in a lecture series. He wrote: "Not one of the lecturers has any qualifications to speak authoritatively on the subject . . . two of them are indeed not only 'professional anti-Communists,' but are well known rabble-rousers of the totalitarian type — he (Dr. Sluis) is not billed for what he really is: Chairman of the Northern California Section of the rabid 'Christian Anti-Communist Crusade'."

I am grateful for the training in scientific method and objective analysis received at Harvard and believe they are relevant to my present vocation which includes the study and teaching of the pathology of Communism.

In July, 1958, a colleague invited my wife and me to a meeting of the Christian Medical Society to hear Dr. Fred C. Schwarz, Executive Director of the Christian Anti-Communism Crusade. Though our American ears were unaccustomed to his Australian twang, the impact of the clear logic of his message was inescapable. Although I would have preferred to do so, I could not characterize his attitude, message, or suggested program, then or now, as rabid. To be sure, the reasoned and honest assessment of the nature of the Communist threat was emotionally disturbing. The objective evidence of past Communist success, coupled with a presentation of the consequences of Communist philosophy in the moral realm and the very real danger of Communist world power, became obvious and alarming. I was challenged to examine my own program and philosophy of life in relation to this reality.

CHRISTIAN COMMUNISM CRUSADE

Following this initial contact I returned to my medical practice, but occasionally I spent wakeful nights considering the evident and objective truth that one billion people in the world today are being systematically trained, indoctrinated and regimented by the Communists for the conquest and destruction of our country, homes, and families. I began to question in my own mind whether patient care and possible personal contributions to improved orthopedic surgery were the highest services I could render to humanity. Faced with the clearly observable fact that the Communists *are* conquering the world and the predictable consequences of their triumph, would not my *primary* responsibility as a physician, father, and citizen lie in the direction of doing what I could to help defeat Communist tyranny and preserve life, liberty, and pursuit of happiness?

In December, 1958, I attended for three days one of the early five-day schools of anti-Communism conducted in association with the Christian Anti-Communism Crusade. The sessions provided a short but intensive course of study in Communist philosophy, morality, strategy, tactics, and objectives, material from the theoretical texts of Communism presented by Dr. Schwarz. These schools seek to teach the true nature of Communism with stress upon its permanent philosophic basis. The premise of these schools is that the changes within Communism are demonstrations of adherence to their dialectical philosophy rather than departure from it.

COMMUNIST PHILOSOPHY is dialectical materialism. One of the important applications of the dialectic is that while the objective is fixed, the pathway to the objective



can vary as the needs arise. The mobility of their political, economic, and diplomatic conduct illustrates their faithful allegiance to their philosophy. They can support any movement, profess any purpose, practice any religion, as long as all these ultimately lead to Communist world conquest. An interpretation of Communist conduct and a prediction of future conduct must be made with an understanding of their philosophy.

The Christian spirit, devotion to truth, adherence to principles of academic freedom, and personal dedication evident at the meetings were an inspiration. The philosophy of the school seemed sound. How could I disagree with the thesis that the accurate diagnosis of any disease is the minimum requirement for its effective treatment?

Reluctantly I faced some unpleasant truths. The Communists' program for the conquest of the United States involves neither the conversion of the American people to Communist doctrines nor the defeat of America in an atomic thermonuclear war. Their real program is expressed by the formula, "Encirclement plus demoralization leads to progressive surrender." The title given to this program is "coexistence". It was formulated officially by Joseph Stalin in 1952, though it was foreshadowed by his doctrine, "socialism in one country," in 1928. The past and present success of this program became alarmingly clear.

After attending the school I saw in the words of Edmund Burke a deeper significance than ever before: "All that is necessary for the triumph of evil is for good men to do nothing." I did not at this time have any clear idea about what I could do but resolved to find out. I continued my own study of the problem and began speaking publicly wherever the opportunity presented itself. The local work grew and gradually became largely self-supporting through the volunteer efforts and contributions of many individuals. A local branch office of the Christian Anti-Communism Crusade was opened in San Francisco in 1959. The work has proved fascinating and satisfying, for it has opened avenues of service that reach far beyond the usual boundaries of medical practice.

My attention became focused upon the rising tide



Aside from his work with the Christian Anti-Communism Crusade, Dr. Sluis is a diplomat of the American Board of Orthopedic Surgery and serves on the clinical staff at the University of California Medical Center. He is a clinical instructor at U.C. Medical School and affiliated with several San Francisco hospitals.

of Communism in Latin America. Groups of young Communist leaders, known as "cadres," were being recruited in Latin American universities and trained for the eventual seizure of power in their countries. This program had been dramatically successful in Cuba. The Cuban conquest provided a military supply line to Communist guerrillas in other countries of the Western Hemisphere. Cuba also served as a base for economic penetration, diplomatic subversion, and propaganda warfare. In 1960 I made my first trip to Latin America, visiting ten countries and studying the Communist problem.

IN OCTOBER, 1960, I learned that British Guiana was a vitally important Communist target. To understand this it is important to remember that with very few exceptions the Communist program of conquest in any country has required the existence of a common border with an established Communist country. The two exceptions to this rule are Russia itself and Cuba. It is possible that a third exception may be British Guiana. If the Communists successfully achieve this goal, their standard method can then be followed in the remainder of Latin America. Communist conquest is usually the result of the operation of internal revolutionary forces which are supplied, disciplined, and directed from outside. To supply these internal forces with weapons and leadership and to provide them with a secure haven to which they can retreat if the governmental forces press them too severely, a common border with a Communist country is needed. Thus the basic requirements for conquest are: (1) Internal Communist-led revolutionary forces, and (2) An adjacent Communist base. The internal revolutionary forces have already been recruited and are active in most Latin American countries. The key members of these forces are usually recruited from the universities. These young Communist intellectuals are trained and molded to become the future Communist managerial elite. These dedicated, fanatical Communist youths then "scientifically" exploit the grievances and ambitions of various segments of the community to recruit the revolutionary force and lead it against the established authorities. There is no shortage of grievances which can be used by these Communists to rally opposition throughout Latin America. Many of the elements actively fighting in this revolutionary force may be non-Communist or even anti-Communist. They are frequently unaware of the Communist character of their leadership.

The major problems facing the international Communist movement are: (1) How can revolutionary forces be supplied with the necessary weapons and leadership? (2) How can they retain power once the groups whom they have deceived become disillusioned and hostile? To cope with these problems they need an adjacent base with adequate forces. Two countries in the Western Hemisphere which are major targets for conquest by



British troops come in to British Guiana to restore order during rioting in Georgetown on February 16, 1962. The burning buildings are two Indian stores fired by rioters.

the Communists are Venezuela and Brazil. Should they be successful in these two countries, the consequences for all South and Central America would be catastrophic. In both countries they have recruited Communist-led revolutionary forces which are in open rebellion against constituted authority. Communist leaders are exploiting the many internal grievances very effectively. In Venezuela revolution is chronic and recurrent. The government has faced crisis after crisis. In Brazil, Communist-led guerrilla bands roam the northeast, awaiting the day of complete conquest. Only the necessary adjacent base of supply and refuge is lacking.

British Guiana is ideally located to serve as a Soviet base of supply for the guerrilla forces of both Venezuela and Brazil. Should it come under complete Communist domination, it would represent an enormous advance towards the Communist conquest of both the above countries.

British Guiana may soon share with Cuba and Russia the distinction of having been conquered by Communism without the use of a Communist neighbor; Cuba is not far away, however, and may fulfill this role. British Guiana, located on the north coast of South America, is about the size of Idaho. Although rich in natural resources, only about one percent of its total area is under actual cultivation. The population is only one half million; approximately one half of the people are of East Indian origin, one third are of

African origin, and the remainder are Europeans, Orientals and South American Indians. A British colony since 1803, British Guiana is governed by internal self-rule, although foreign relations are controlled by the British government.

The present head of the British Guianese government is Dr. Cheddi Jagan, who stated during last year's British commission inquiry in Georgetown, "I am a Communist, as I understand the tenets of Communism." He had studied at Howard and Northwestern Universities where he embraced Communism and married a girl of the young Communist League, Janet Rosenberg. On returning to British Guiana they organized the People's Progressive Party. Jagan is leader of the party and Premier of British Guiana; Janet edits the newspaper, *Thunder*, and organizes with ability and thoroughness. She recently returned from conferences in London via Peking, China, where she was honored guest of Mao Tse-tung.

THE SOCIAL FORCES utilized by the Jagans in their quest for political power have been Indian nationalism and racialism. Because Jagan is an Indian, he and his party have the instinctive support of the majority of the Indians who are located mostly in rural areas where they

work on rice and sugar plantations. The Africans instinctively support the African political party — the People's National Congress — and its leader, Forbes Burnham. The significant fact is that Jagan is a member of the International Communist conspiracy, while Burnham is not a Communist. A third political party, led by a businessman, Peter D'Aguiar, has garnered some support from Indians, Negroes and Europeans, but its appeal is primarily to the business community.

In 1953 Jagan was elected to limited political power. He followed an extreme policy of non-cooperation with the British and revolutionary agitation, which he later classified as left wing deviation. The British moved in troops, suspended the constitution, and expelled the Jagan government. Jagan received his first practical lesson concerning the real basis of political power which is succinctly expressed by the Chinese Communist leader, Mao Tse-tung, in his famous statement, "Political power grows out of the mouth of a gun." In 1957 elections were held under a new constitution. Jagan was re-elected but this time with an opposition — the People's National Congress, led by Forbes Burnham.

I have visited British Guiana on six different occasions, the first time in February, 1961. From June, 1961, through the August election, I led a group of two Americans, and three East Indians (who had experienced the Communist rise to power in Kerala, India) in conducting open-air meetings; we showed movies about Communist methods used in Latvia and Cuba, gave talks, and answered questions. J. Edgar Hoover termed the Communists, "Masters of Deceit," and our program was based solely on providing the people with knowledge and understanding of Communist deceptive techniques and strategy. We distributed hundreds of copies of Dr. Schwarz's book, *You Can Trust the Communists — to be Communists*, and helped individuals and groups distribute other simple literature. We received the warm reception and cooperation of trade unionists, Hindus, Moslems, businessmen, and people of every race. Ambassador de Lesseps Morrison, U. S. Representative to the Organization of American States, commended our work in British Guiana. The August, 1961, election re-established Jagan in power with 20 out of 35 Parliamentary seats. He received, however, only 42.7 per cent of the votes. The People's National Congress received eleven seats, and the United Force, four seats in the Assembly. It now seemed that Jagan had merely to wait for independence to gain complete charge of the foreign relations of British Guiana, at which point he could make any agreement he wished with the Soviet government.

THE EVENTS that transpired in February, 1962, again showed clearly that political power grows out of the mouth of a gun. Jagan and his government are located

in Georgetown, the main city of British Guiana. The majority of the citizens of Georgetown are Negro and support Burnham. Jagan introduced a harsh and unpopular budget. Opposition to his budget was immediate and united. Protests were launched by the opposing political parties and all segments of the community. What began as mass demonstrations involving 50,000 people turned into riots on February 16. A number of people were killed, and one third of the city of Georgetown was burned to the ground. The besieged government of Cheddi Jagan had to call upon military force to maintain itself in power. It called for British troops, who were landed, restrained the violence of the mobs, and sustained the governmental authority of Jagan and his party. Thus the role of the British troops was reversed in 1962 from what it had been in 1953.

In May, 1962, Dr. Schwarz and I were declared "prohibited immigrants" by the Communist-led government of British Guiana. I am probably the only Harvard Medical School alumnus to have received that singular distinction, and I wear it with pride and honor.

Jagan's power has been waning. British troops are needed to protect him from the hostile populace. His parliamentary majority has shrunk to one. (The Minister of Home Affairs, Balram Singh Rai, who is an anti-Communist and challenged Jagan's nomination for presidency of the party, has been expelled, among others.)

It seems unusual that Jagan should be clamoring for immediate independence in this situation. He would lose the protection of the British troops, and, in the event of future trouble with the African population of Georgetown, he could not call upon them for help. The quest for independence in these circumstances might appear foolhardy.

Deeper consideration, however, will show that immediate independence could bring about a great Communist victory. Its purpose would be to transform British Guiana into a Soviet base to supply the Communist-led guerrilla forces of Venezuela and Brazil. There are obvious hindrances to achievement of this goal. They are: 1. The determination of the United States to prevent the establishment of a Communist stronghold in South America; 2. The hostility of the people of Georgetown. Jagan is confident he has the means at hand to solve both of these problems. America can be neutralized by a military treaty between British Guiana and Russia. This could be consummated with great rapidity. Any intervention by the United States could then be interpreted as military intervention demanding the protection of Russia. Arguments against American intervention in Cuba would apply with greater force to British Guiana.

Jagan would still need protection against the hostile population of Georgetown. He is trying to train young Indian activists for the purpose. A youth organization which is much more openly Communistic than the People's Progressive Party is called the PYO, the People's

Youth Organization. Many of its leaders are receiving military training in Cuba. If these are inadequate, an invitation could bring adequate forces based in Cuba. Jagan could thus be protected, and a Communist dictatorship would be established. The purpose of the Soviet troops in Cuba should be obvious to all. It is difficult to exaggerate its sinister significance. It should stimulate every individual to concentrated study of the problem in an effort to devise practical plans to avert the imminence of Communist control of Central and South America.

THE DEFEAT OF COMMUNIST TYRANNY and preservation of freedom is the responsibility of every citizen in the free world. The answer to the Communist threat is a multiple one and rests in the deep-seated motivations of love, devotion to truth, and freedom of many individuals and groups. The Christian Anti-Communism Crusade is but one of many groups that should be formed to deal with Communist warfare in many avenues of life. Its existence is in tune with the processes of a free society, whose unity is shown by diversity of groups, freedom of association, competition, and mutual cooperation, which conserve rather than cancel out the motivating forces within each group.

The Communists understand this very well and operate through a great number of front organizations, each of which is tuned to some specific motivating dynamic. Every religious, professional, business, economic, and cultural group should organize an anti-Communist program.

The finest motivation is impotent without adequate knowledge. Communism should be taught in the schools as disease is taught in medical school. It should not be taught as an alternative economic philosophy, but as a system of tyranny. The object of such instruction should be to reveal the deceptive subtleties of Communist dialectic and to promote a greater devotion to freedom.

Who will win this struggle? The Communists are supremely confident of complete victory. They claim that it is guaranteed by the quality of character in free societies. They affirm that the environment generating this character is capitalism in its dying phase and that since it is dying, it creates character without survival value. We categorically reject this claim. We are not the helpless victims of our environment, doomed to destruction. The fault lies not in our environment, but in ourselves. A free society can function effectively only when individual citizens have enlightened minds and are dedicated to the foundations of freedom. Material forces alone do not determine man's destiny. Each individual must meet the challenge and decide his role in the battle for the survival of individual liberty. My choice has been made, the experiences of the last two years have confirmed my assurance of the wisdom of the choice.



SHOULD



I STUDY MEDICINE

By Edward Delos Churchill '20

The question asked in my title is in the minds of thousands of young Americans as they are assembling in preparatory schools and colleges during the month of September.

There has been little helpful information formulated by psychologists and sociologists engaged in studying the forces that shape the choice of a career by young men. Much of their effort has been directed toward the selection of individuals from those who have already expressed a desire for specific educational programs. Even in this matter factual inquiry has begun so recently that conclusions hastily drawn are unlikely to prove justified. The prediction of the future performance of an applicant in a given field, however, is quite a different matter from the discovery of the reasons which have led to a decreasing number of applicants for the field.

For our purpose this evening, I shall start with the conclusions of a study conducted by the Bingham Associates Fund in 1959. These at least provide the basis for constructive action at the level of the individuals in this audience. The decreasing interest in medicine among the students of the several colleges in the State of Maine caused concern for some years and when in 1959 only 16 students from the entire state entered medical schools, a determined effort was made to find the reasons. Obviously many factors are involved, but the study identified two reasons as basic: first, a *lack of proper information* on the subject of a medical career and, second, an *abundance of misinformation*. These applied not only to the students themselves but also to those from whom the students were supposed to be getting the information.

These two basic reasons bring the problem down to the level of the individual doctor. It is from him, with all due respect to expert non-medical career counselors, that the talented youth of the nation should be deriving proper information and a minimum of misinformation. An active effort to provide contacts and disseminate information about careers in medicine to college students in Maine is proceeding under the auspices of the Bingham Associates Fund with the full cooperation of college presidents. Its results will be awaited with interest.

Dr. Churchill, John Homans Professor of Surgery, Emeritus, delivered the Frank H. Lahey Memorial Lecture last September. Above are excerpts from the lecture, printed in full by the New England Journal of Medicine, March 7. The facing picture, taken by John Lowengard, catches Dr. Churchill in a characteristic pose during rounds.

Even if the opportunity is provided for greater contacts between doctors and college students, the task of imparting information and minimizing misinformation is not likely to prove an easy one. In fact, I suspect that some of the misinformation now being disseminated finds its origin in doctors themselves.

The establishment of a doctor-college student relationship is a new and ingenious idea, but is not a task for an amateur. Doctors must be found who understand the attitude and psychological stance of the contemporary college generation and at the same time can interpret the complexities of the medical profession in an objective and understanding way. College youths are realists demanding answers to questions that cannot be evaded or swept aside by prejudiced or vague reassurances. They want to know about the attitude of the A.M.A. How soon is medicine going to be brought under government control? Why do doctors cover up the mistakes of colleagues? Why is unnecessary surgery tolerated? These and many similar questions have to be met head-on with convincing explanation.

On all sides I sense an apologetic self-derogatory mood in the profession and a lack of the conviction which should uphold the dignity and importance of the position of medicine in our culture. Self-criticism and continual striving toward improvement are essential within the profession, but it seems to me that important presidential addresses too often take on the pattern of a tirade against the old perennial evils of fee-splitting, unnecessary surgery and incompetent medical practice. All this amounts to what formerly was called the public washing of dirty linen. Today however, such pronouncements are seized upon by journalists and others who deal with medicine more and more at second hand. Their ripples spread far.

Gifted lay amateurs enter the scene with opinions supported by charts, graphs and statistics purporting to deal with the shortcomings of the medical profession. A Canadian Professor of Social and Preventive Medicine has recently written: "Such data can only be obtained from a variety of unrelated sources. The sources used, and the information obtained, frequently reflect the bias and prejudices of the investigator. It is quite understandable, under the circumstances, that an infinite number of judgmental pronouncements on psychosocial economic topics are made by innumerable self-appointed experts. These experts may be heads-of-States, sociologists, economists, playwrights, novelists, psychiatrists, columnists and even ordinary physicians." Frustrated in their well meaning

efforts to correct socio-economic evils and neglects, their indignation becomes centered on the doctors for their seeming "indifference." The "hard-faced" doctor thus emerges as did the "hard-faced" industrialist as a popular target of abuse.

Even our senior medical students have become bewildered by the turmoil they begin to sense and the accusations thrown in their faces by contemporaries in other professions. Recently I read aloud to a small group of students the familiar address, "*A Doctor's Work*," given by Rudyard Kipling to the students of Middlesex Hospital in October 1908. It contains such passages as: "Every sane human being is agreed that this long-drawn fight for time that we call life is one of the most important things in the world. It follows, therefore, that you, who control and oversee this fight, and who will reinforce it, must be amongst the most important people in the world."

Not one of these students knew of this classic address which I wish I had time to quote *in extenso*. Their response contained a note of pathos: "We wish someone would say such things about us today!"

I am both annoyed and indignant when I hear glib lay panels assembled to discuss the so-called "tarnished image" of the doctor. Picture the righteous anger and quick repartee of Doctor Lahey if he had encountered such a phrase! I have known thousands of doctors during my professional life and have helped educate thousands more. I am proud of being a doctor — I am proud of being a surgeon. It is time this self-conscious and self-abasement trend be reversed and our dignity be reasserted, for in Kipling's words, we *are* amongst the most important people of the world.

My good friend, Douglas Robb of New Zealand, also lost his patience in the face of criticisms of the profession: "In recent years," he wrote, "the medical profession has been freely criticized for self-interest and neglect of public duty. Without doubt, in my opinion, there has been some substance in these criticisms, but the main factor working against the effectiveness of them has been the hollow note in the voice of those who make them. When we hear the wharves humming with happy shouts of the Sunday workers proudly turning the ships around to get the butter more quickly to the Old Country — when the coal-getters ask leave to work on a holiday rather than let the national bunkers get low — when the politician resigns rather than be party to a political bribe or favour contrary to the public welfare — then these criticisms of the doctors will make more impression. In fact, as rackets go, the medical one has never been a particularly harmful one."

Let us look for a moment at the background of the present situation. The central fact of history in what is recognized as the Western World is unquestionably the decline of religion. It has been said that Christianity could not have arisen if its teachings had not contained the miracles of healing attributed to Christ. Despite the slow separation of Medicine from Divinity over the centuries, traces of the ancient linkage between the two great learned professions can still be discerned. The friendly division of responsibility toward man has left the soul and the nurture of man's spiritual life to religion and defined the mind and the body as the province of medicine. I shall return in a moment to this central fact of history.

The waning of religion has paralleled the ever-increasing organization of human life along rational lines, a trend recognized by Max Weber as another central process of modern history. The industrial revolution and the scientific revolution with the growth of capitalism have brought the organization of economic enterprise in the

interest of efficiency. With this has come the subdivision of human function in factories and industrial cities. Man as an individual has become man in aggregates or collections of men acting in unison with high value placed on conformity in behavior and actions. One speaks of collectivized man and the domination of his life activities by technology.

It is not generally appreciated that medicine, with the exception of public health, naturally centers on the needs of the individual and in the present stage of its evolution is poorly adapted to deal with the mental or physical needs of man in the aggregate. Military surgery furnishes a prime example of treatment applied to man in the aggregate; but even with armies in combat the hypothesis of "the greatest good for the greatest number" rarely is put to the actual test. There are a few other exceptions that come readily to mind but the subject need not be labored further. The key point to be recognized is the conflict encountered when an attempt is made to adapt the highly personal service of medical care to the socio-economic changes which have produced collectivized man. Effective therapy is as often as not based on and dependent on the inter-personal relations of doctor and patient. Conflicts today center in this socio-economic tension zone, and it has been the evolutionary trend in society itself rather than the self-interest and cupidity of the medical profession that has produced the furies and socio-economic dilemmas which beset contemporary medical practice.

To return now to the decline of religion and its particular significance to medicine. William Barrett in a skillful metaphor has described religion as "not so much a theological system as a psychological matrix surrounding the individual's life from birth to death, sanctifying and enclosing all its ordinary and extraordinary occasions in sacrament and ritual." With the dissolution of this matrix man has been cast adrift. He is searching desperately for support and meaning in life.

The image of the healer was ever a constituent of man's religious matrix. Small wonder that man is now seeking out the physician for symptoms that arise in frustrations, loneliness and uncertainty. The ascendancy of psychiatry bears witness to these needs.

If this were not enough, the relentless trend of socio-economic evolution and the increasing collectivization of man have brought the circumstances which surround the socio-economic consequences of offering help to the individual into the spotlight. To help one's fellow man when he was in distress was once a simple act — the kindly and self-rewarding act of the Good Samaritan recorded in the great book of Saint Peter. Today an analysis of the act is punched in code on an IBM card and not even Heaven knows what ultimate interpretation may be made of the data.

So far as the "tarnished image of the doctor" is concerned, this phrase can be taken in its literal meaning. An image is an imitation or representation not a directly perceived object. It is subject to distortion by the mind which forms it. Tarnish on the image of the doctor is as likely to be the product of the mind in which it is represented as a flaw in the doctor himself.

And so to the young man who is pondering "Should I study medicine?" I say, seek information and above all, beware of misinformation. Doctors are still "among the most important people of the world." Mankind itself needs the wisdom of talented young men in medicine as never before. And to doctors everywhere I say, hold your heads high, cultivate professional dignity and self-reliance and be patient with the frailties of man.

Letter from the President

At its meeting on March 20, the Harvard Alumni Council unanimously approved participation by the Alumni in the Program for Harvard Medicine. As you may know, this is the largest campaign ever organized to obtain capital funds primarily for faculty support. The Council decision calls on each of us, in recognition of the national significance of the Program and of the importance of the Alumni in achieving our goal, to add our personal endorsement to the effort.

Not since the present Longwood Quadrangle was built in 1906 — almost three score years ago — has the Harvard Medical School made such a major effort to buttress its resources. If Harvard is to continue to forge new programs of teaching and research, to lead in improvements in patient care, and to set standards of achievement for other medical schools in the country, Faculty salaries must be undergirded by adequate endowment. Endowment income, greatly watered down by an ever-enlarging budget and an ever-decreasing dollar value, has assumed a smaller and smaller percentage of the overall expenses of the School. More permanent funds are essential to the continued excellence of Harvard Medicine.

The Program underway now is a once-in-a-lifetime endeavor. It represents the usual means by which any major institution builds up its financial resources. The help of Alumni is essential for three reasons. First, the support that we, as beneficiaries of a Harvard medical education, bring to our Alma Mater is a most effective way of convincing others that the School is receiving the firm backing of those having the greatest reason to be concerned for its future. Second, the Program requires an unusual amount of effort and sacrifices in time on the part of those who are working to organize the Alumni campaign. As Western District Chairman, I have found a ready willingness on behalf of key Alumni to lend energy, ideas and hours of service. To this end other District Chairmen, under the leadership of Claude Forkner, National Alumni Chairman, are also enlisting assistance. In addition, we are turning to Alumni for guidance in directing us to major sources of wealth among grateful patients or among philanthropists in the community.

Finally, the Alumni's share of responsibility for the Program's success requires also that each of us devote the most careful thought to our own giving. At the start, our major concern is with the advance gift phases; however, the Council feels strongly that every Alumnus should be encouraged to participate — 100% involvement is our goal.

Traditionally, Alumni of the Harvard Medical School have led in marshaling resources through annual giving to the Alumni Fund. No other medical school in the country has established such a fine record of continuous giving by its graduates. Year by year the Fund must remain as the first responsibility of every Alumnus. During the coming months, however, we are requesting your thoughtful consideration of an additional expression of loyalty, of an ultimate gift to help guarantee that the high performance established by the Harvard Medical School in the past will be perpetuated to the future.

JOHN H. LAWRENCE '30



TO AROUSE DESIRE

By Ronald T. Rozett '63

MAN HAS WANDERED THROUGH HISTORY, CHANGING with the tides of season; yet since the days of Adam all societies have shared in one vested interest, the business of procreation — to perpetuate the race, gain favor with the gods, and derive pleasure from life. In view of the emphasis both nature and organized man have placed on sex, is it any wonder that the individual participant in the hard sell of living should be vitally concerned about his sexual prowess and reproductive ability?

Every one of us should be able to recall the doubts and anxiety of adolescence. We can also imagine how a previously hot-blooded Lothario must feel when he can no longer keep up with the younger Joneses. (As one author phrased it, "since sex began, men — and women — have dreaded the time when, because of advancing age, physical weariness, mental inhibitions, or whatever, the game of love would have all the appeal of a marathon run.") More seriously, we should be able to imagine the desperation of the woman who discovers that she cannot fulfill the role which society has designated her *raison d'être*. These problems have existed since time began, and man has continually sought their solution — often in the form of aphrodisiacs.

"Aphrodisiac" derives from the Greek *aphrodisia*, meaning sexual lust, venery, and from *aphrodisiakos*, sexual desire — both pertaining, of course, to Aphrodite, the mythical Greek goddess of love and beauty, who sprang full-grown without benefits of a mother from the foam of the wine-dark sea. The legend goes that Uranus, the sky god and personification of heaven, was at the





WHERE NONE DOTH LIE

same time a bit of a cut-up and runabout with the goddesses and lesser women, as well as being a wretch to his wife and children who waited faithfully at home. He was son and — cad that he was — husband of Gaea (earth) and so hated his offspring, which included the Titans, that he confined them to Tartarus, or Hades. Finally Kronos, the youngest of the Titans, dethroned Uranus in a fit of patricidal anger and cast his mutilated corpse into the sea, and from the resultant turbulence sprang Aphrodite. One must pause to comment on and marvel at the rather unpropitious origins of this young girl and the great fame she nevertheless attained. One might call it a classical success story.

One of the first aphrodisiacs was Aphrodite's girdle — the Cestus — and whoever wore the treasured garment became the object of ardent love. It loosened and tore asunder, however, if worn by an unchaste or unfaithful wife, as when Venus wantoned with Mars in the Roman myth; but, of course, that did not occur until *after* the garment had accomplished its purpose. The subject of many classical allusions in later literature, the girdle appears in Spencer's *The Faerie Queen* as the Girdle of Florimel.

A few references to aphrodisiacs may be found in the Bible, as in Genesis, chapter XXX, verses 14-17. Jacob was apparently duped into marrying Leah, the older and less attractive sister of Rachel, his true love, though the father of the two girls did allow him to take Rachel as his number two wife. Leah, although disliked by Jacob, did him eminent service by bearing him four sons, the oldest of whom was Reuben, while Rachel,

though apparently well-loved by Jacob, remained unable to give her husband any children.

And Reuben went in the days of the wheat harvest and found mandrakes in the field and brought them unto his mother Leah. Then Rachel said to Leah: "Give me, I pray thee, of thy son's mandrakes." And she said unto her: "Is it a small matter that thou hast taken away my husband? And wouldst thou take away my son's mandrakes also?" And Rachel said: "Therefore he shall lie with thee tonight for thy son's mandrakes." And Jacob came from the field in the evening, and Leah went out to meet him, and said: "Thou must come in unto me; for I have surely hired thee with my son's mandrakes." And he lay with her that night. And God hearkened unto Leah, and she conceived, and bore Jacob a fifth son . . .

The mandrake was also valued highly by the citizens of ancient Greece and Rome and was used in love potions concocted for the purpose of increasing sexual desire and potency as well as a remedy for sterility and as an aid in conception. More famous than the mandrake, however, was the satyrion (from *satyr*, a type of lecherous sylvan demigod usually depicted with the tail and ears of a horse), which seems to have been a kind of orchid. Plutarch speaks of it in his *De Sanitate Tuenda*, and Dioscorides and Pliny claim that the root of this herb aroused excitement if simply carried in the hand. Hercules was once served a potion brewed from the plant and proceeded to deflower the fifty daughters of his most certainly astonished hostess in one night.

Cupids making ointments and perfumes in an apothecary shop. Wall painting in the Casa dei Vettii, Pompeii. Bettman Archive.





(Above) Dioscorides receives the root of the Mandrake from the Goddess of Discovery. The dog that pulled root from ground has gone mad from it's screams. (Below) Mercurius brings sacred Molly (Mollium) to earth. Figure at left is Homer. Bettmann Archive.



Another legend relates that an oriental ruler sent a plant of this species to the Syrian monarch, Antiochus, who immediately entrusted it to a slave for safekeeping. Apparently overwhelmed by the potency of the precious aphrodisiac, he is said to have "... offered seventy uninterrupted sacrifices to Venus." It is certainly odd that a plant with such prodigious powers should drop from historical view, but that it did. It survives today only as the name of a preparation sold in London which, according to one author, "... seems to have little connection with the satyrion of the ancients."

MANY OTHER APHRODISIACS were used during the Classical era, but the recipes were often closely guarded secrets. Ovid lists the constituents of some of them in his *The Art of Love*, book II, and almost every organ, bodily product and herb were apparently used in one or another of the concoctions. Often these preparations had undesirable side-effects, however, and legend has it that the Roman poets Lucullus and Lucretius both died from the poisonous properties of some ill-begotten aphrodisiacs. (One of the versions of the story of Lucretius argues, however, that far from dying from poisoning, he killed himself in a frenzy after having imbibed the iniquitous brew — which had been given him by his apparently dissatisfied wife.) Because of these dangerous qualities, the sale of aphrodisiacs was regulated by the government; but the trade was still big business. Not everyone approved, of course: Lucretia, a virtuous Roman matron of the 6th century B.C., scornfully observed: "The sole philtre I ever used was kissing and embracing, by which alone I made men rave like beasts and compelled them to worship me like an idol."

Practically every oriental manual treating the art of love contains information on aphrodisiacs, foods conducive to sexual stimulation, and other means of increasing the pleasures of love. The two best-known Arabian amatory works are *The Perfumed Garden for the Delectation of Souls* by Nefzawi and *The Book of Age-Rejuvenescence in the Power of Concupiscence* by Ahmad bin Sulayman, both of which contain some surprisingly valid advice. Parts of *The Perfumed Garden* "read rather like an antiquated version of Van de Velde's *Ideal Marriage*," according to one modern reviewer.

Of the recipes for aphrodisiac foods, medicines, and external applications, some are ludicrous, but many are

The author, a fourth year student at the Medical School, presented the paper from which this article was taken to the Boylston Society. Next year Mr. Rozett will be interning in medicine at the Beth Israel Hospital, Boston, Mass.

at least pleasant in composition and may act indirectly through improvement in general nourishment and state of health in an area where a marginal diet was — and still is — the rule rather than the exception. Nefzawi apparently recognized this, as may be seen in his list of eight factors which improve sexual capacity: “bodily health, absence of all care and worry, an unembarrassed mind, natural gaiety of the spirit, good nourishment, wealth, the variety of the faces of women, and the variety of their complexions.” Among the numerous commodities that Nefzawi recommends as aphrodisiacs we find ginger, vinegar, garlic, peppers — and sparrows’ tongues, which even S. S. Pierce does not carry. Two of the favorite recipes are camel’s milk mixed with honey and a gastronomic fright compounded of food ordinarily available to even the most humble nomad of his day: to one part onion juice are added two parts purified honey; the mixture is heated until the onion juice evaporates, at which point the residue is cooled and mixed with three parts water, in which macerated chick-peas are then simmered for twenty-four hours. The author promises that if a small quantity is imbibed during the winter before going to bed, there will be little rest during the night that follows.

In *The Book of Age-Rejuvenescence in the Power of Concupiscence*, more succinctly entitled *The Old Man Young Again*, the author anticipated the famous discussion of the role of olfaction in sex by Havelock Ellis and advises perfumes for his probably offensive warm-climate readers — even for the men. “The use of perfumery by men should be included amongst those things which conduce to sexual union; for, when as the woman doth inhale the odor of the scent, she waxeth faint and shortly becometh utterly distraught.”

One of the more interesting Arab practices was an early attempt at psychotherapy for male impotence. According to this ritual, a religious-medical figure placed his hands over some water and recited the penultimate chapter from the Koran to protect the water from magic. The suppliant then washed, drank, and prayed in the water, and after this ablution, assumed a prescribed, rather bizarre position and stared at the priest, who returned a deeply penetrating, possibly somewhat incredulous gaze at his oddly postured client, reciting the final two chapters of the Koran as he did so. If the cure was not achieved at the first sitting — or whatever one might wish to call it — the identical procedure was repeated three times at strict weekly intervals — a remunerative if not entirely efficacious technique.

The old tales and legends of India claim that a man who follows the numerous methods of increasing his sexual prowess should be able to satisfy a thousand women in one night — an objective to be wondered at if

not actually admired. The commonplace onion, garlic, and beans appear time and again in Indian erotic cookery, and the *Kama Sutra* contains two chapters on aphrodisiac ointments, philtres, and foods which describe exotic herbs and animals alien to the occident.

Indian literature of this nature must be credited, however, with some very perceptive and “modern” thoughts on sex. The *Ananga-Ranga (Stage of the Bodiless One)* by Kalyanamalla, deals with courtship, marriage, coital techniques, sex hygiene, obstetrics, and gynecology, and implies a mature and spiritual concept of sexual union which was rare in that era when most peoples appear to have seen only its physical aspects. The author also recognized that the woman as well as the man has the right to expect satisfaction and advises techniques and preparations by which it may be attained.

One of China’s contributions to aphrodisiacs is the celebrated bird’s-nest soup, prepared from the nests of the sea swallow. Made from an edible seaweed, the nests are held together with fish spawn, which is extremely rich in phosphorus — possessing legendary, if not experimentally documented, action in increasing both desire and male potency.

More important than bird’s-nest soup, the Chinese have long used opium as an aphrodisiac. Like alcohol, opium in moderation seems to possess aphrodisiacal properties but apparently leads to a loss of potency when taken in excess. Shakespeare might as well have been speaking of opium when he said in *Macbeth*: “It provoketh desire, but it taketh away performance.” Unlike alcohol, however, opium-smoking allegedly often induces strange sexual fantasies.

IN EUROPE THE CRUSADES brought modifications of imported Arabian and other oriental aphrodisiacs which took their place beside those indigenous to European civilization. The usual assortment of allegedly stimulating foods were commonly recommended, but magical preparations also had their place in the aphrodisiac armamentarium of the witches and wizards of the day, because spells and evil spirits were held responsible for impotence and sterility. The exact contents and proportions of the magical concoctions were usually secret, but we know that they often included human excrement and portions of human cadavers. Nicolas Flamel, a 14th-century scholar of the University of Paris, recommended wormwood as “powerful in the prevention of sorcery directed against potency; but it is necessary first to steep it for three days in the urine of a virgin of sixteen years.” Used for centuries as a vermifuge and a tonic, wormwood — *Artemisia absinthium* — is now chiefly used in making the notorious French liqueur, absinthe, considered a sexual stimulant which in large quantities reputedly produces insanity.



(Above) An old woodcut of witches brewing a charm. (Below) An Augsburg woodcut of the narcotic Mandrake root, from an ancient textbook of medical science. Bettmann Archive.



Pouring magical concoctions into a lady's wine was a difficult task, a skill acquired only after years of rigorous practice with the less desirable females of the vicinity. It was far easier to take a fragment of one of the lady's intimate articles of clothing or her nail parings or some of her hair, and have a sorceress burn it, thereby putting a spell on the desired female.

Charms at the disposal of women included the making of the magic cake, *confarreatio*, originally made of spelt — a type of wheat — and offered at Roman weddings. A lady who wished to bind a lover would consult the local sorceress, who ordered her to lie naked on a wooden bench. The sorceress then placed a board across the suppliant's pelvis and set up a small oven on the board. The *confarreatio* was baked in this oven amid howls of pain from the distraught lady, for the well-worn board proved but poor insulation against the oven's heat. The sorceress doubtless reassured the unfortunate woman that the heat was emanating from her pelvis and that this was indeed a good omen. The lady then returned to her castle with the *confarreatio* and, lacking the advantages of petroleum jelly and split-thickness grafts, nursed her burns in joyous silence. The cake was slipped into the suitor's meal on his next visit.

In the Middle Ages almost anything edible was considered an aphrodisiac at some time or another. Chocolate was supposed to be so insidious that one group of monks was forbidden to drink it. Vanilla was equally suspect. Barren women and impotent men even drank small measures of tincture of gold on the theory that the most incorruptible of metals would give them inexhaustible vitality and strength.

Olfactory stimuli were also popular, particularly in 16th-century France where professional beauties carried tiny vesicles filled with musk which they called *pets parfümés*. These would be broken at the appropriate moment, enveloping the lovers in a provocative atmosphere. Ambergris was also used in France, not only in perfumes, but in cooking.

Even as late as this, however, the mandrake remained one of the most sought-after aphrodisiacs. It is not surprising that it had long possessed a rather special distinction as a plant and as an aphrodisiac. Its very real pharmacological and sedative properties were recognized by the Egyptians and the Greeks — including Hippocrates himself, in fact — and its resemblance to the human form resulted in the mystique surrounding it and in its name, which derives from the Greek *mandragora*, or "man-likeness." The legends clinging to the "often strange and curious shape of its long and forked root" reached their zenith in the 16th century, and the demand for it became greater than the supply of the genuine article. Other plants resembling the

mandrake, such as the English briony, were artificially shaped and manipulated into mannikins which were sold for large sums of money by enterprising businessmen of the day. According to Andrea Matthioli, "They carve out (these roots which resemble the human form) while still growing, planting in them grains of barley or millet in those places in which they wish hairs to grow, and then making a trench, they cover them with fine sand until those grains put forth roots, which will happen in the space of twenty days at most. They dig them out at last, and cut the roots which have sprung from the grains and shape them so as to resemble the hair of the head, the beard, and other hairs of the body." The mandrake itself was pressed and shaped into various forms while still fresh since those plants which bore a more accurate likeness to the human body brought a higher price in the mandrake market. If the plant was artificially shaped and then replanted, it was difficult to distinguish the manufactured parts.

As time went on in the 16th and 17th centuries, however, botanists began to discredit the superstitions about the plant, although they continued to recognize its medicinal properties as a soporific and anesthetic. In 1901, Thoms and Wentzel showed that the active component of the plant was a mixture of atropine and scopolamine, both of which are used in modern obstetrics to produce the same sedative effect as the preparations of the mandrake used two thousand years ago.

THE USE OF APHRODISIACS in Europe reputedly reached its height in the 18th century, when the famed Spanish Fly, or cantharides, was utilized extensively and carelessly in chocolates, confections, biscuits and cakes. Cantharides consists of the crushed dried bodies of a species of beetle of which *Cantharis vesicatoria* is the best known. As this beetle is not limited to Spain but in fact is commonly found in southern Europe, the origin of the name, Spanish Fly, is not clear. The active principle of cantharides is cantharidin, a colorless, odorless, rectangular crystal which is fatal when taken in excess of one grain. The substance is a vesicant and irritant, its fabled aphrodisiac effect being no more than the response to a genito-urinary-tract inflammation caused by ingestion of the drug. According to legend, King Ferdinand died after his good queen fed him a home-brewed potion containing cantharides to arouse his waning interest in sex.

Another aphrodisiac of animal origin, bufotenin, is an extract of the skin of a poisonous tropical toad and is a relative of the cardiac glycosides. It is used today by some South American tribes in the form of a snuff called *cohoba*. Also used in South America — and Africa — is yohimbine, a central-nervous-system stimulant derived from the bark of the yohimbe tree.

Pharmacological stimulants tried at various times in our era include strychnine, cantharides, ephedrine, amphetamine, and other sympathomimetics. Aside from cantharides, these drugs are obviously nonspecific central-nervous-system stimulants and might indeed evoke sexual desire in an appropriate setting — as they might just as easily induce convulsions and acute myocardial infarction.

At one time it was earnestly hoped that the sex hormones, once isolated, would provide the perfect aphrodisiac for impotent and desireless mankind. Brown-Séquard injected himself with extracts of canine and guinea pig testes, claiming that he felt rejuvenated but vehemently denying the contention of the popular press that he had discovered the secret of eternal youth. Contrary to universal expectations, testosterone, once purified, did not act as an aphrodisiac in the normal male. It made eunuchs men, but it did not make men supermen. As a matter of fact, only in the female, receiving testosterone or its analogues as palliative therapy for metastatic carcinoma of the breast, does the male sex hormone produce a distressing increase in libido, while the same compounds administered to a normal male produce an equally distressing *decrease* in libido.

The sorry truth is that the true aphrodisiac — with no other effects than sexual stimulation — is as elusive to modern man as it was to his relatively ignorant ancestors. If we were to believe our mass media, however, we would see that modern society is replete with sexual stimulants and aphrodisiacs guaranteed to win the affections of any young man or woman. The makers of a certain hair tonic would have us believe that a little dab of same is enough to send women into ecstasy. Beauty aids galore, soaps, perfumes, clothing, and even cars, all have their value as aphrodisiacs according to the advertising industry, and indeed there is more than a grain of truth in what they say.

As many will agree, however, it may be that the martini is the best aphrodisiac known to modern, commuting man.

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SAMUEL CABOT, JR. —

"GENTLEMAN

A PATHOLOGY FUND at the Massachusetts General Hospital and a tern that breeds along the coast from North Carolina to Texas both commemorate Dr. Samuel Cabot, Jr. — diverse tributes but appropriate, for Dr. Cabot was not only a distinguished physician and surgeon, but an ornithologist as well.

Shortly after his graduation from Harvard College in 1836, Samuel Cabot, Jr. (1815-1885), journeyed from Boston to Kentucky with his maternal grandfather, Thomas Handasyd Perkins (1764-1854). Colonel Perkins had purchased all the seats in the coach, and, as they bumped along the dirty roads, he talked freely of his youth, his clipper ships that sped from Boston to the West Indies and China, and of the interest in birds that he shared with his grandson. (Colonel Perkins was one of the first American patrons of J. J. Audubon's *Birds of America* — 1831.) When Sam was invited to accompany his grandfather to Kentucky, he knew that there would be talk of clipper ships and birds, but that the subject of his future would become the major topic of conversation. Colonel Perkins was interested in medicine. He was one of the original trustees of the Massachusetts General Hospital, and he had deeded his residence to the New England Asylum for the Blind, later to be

Plate XXV of Views of Ancient Monuments in Central America, Chipas, and Yucatán, London and New York, 1844. "Colossal Head at Izamal (Yucatán)." Izamal is now completely destroyed, but as late as the 19th century the Indians burned copal incense on the small stone platform in front of the image. Dr. Samuel Cabot hunts a jaguar at its base, accompanied by an Indian guide.



NATURALIST"

George E. Gifford, Jr., M.A., M.D.



named for him — the Perkins Institute for the Blind. Sam realized that as far as Grandfather Perkins was concerned, his future lay in medicine, and by the time the trip was over, young Cabot had resolved to study medicine with Dr. George Cheyne Shattuck and to attend Harvard Medical School.

After graduating from the Medical School in 1839, he followed the path of postgraduate study from Boston to Paris. His surgical mentor was Alfred A. L. M. Velpeau (1795-1867), professor of clinical surgery at the Paris Faculty from 1834 to 1867 and chief of the surgical clinic at the Charité. Cabot studied medicine with the famous Pierre C. A. Louis (1787-1872). Because his sister, Lizzie, had strabismus, young Cabot was particularly interested in the work of Jules René Guérin (1801-1886), who had perfected a simple operation for the "squint," and from whom Cabot learned the technique of the operation.

Sam maintained his interest in ornithology even while studying medicine in Paris. Of this period his brother, Elliot, wrote:

I learned to be skillful in skinning birds and sent vast numbers of specimens to my brother, Sam, who was in Paris . . . and wanted them for exchanges; for he was a devoted ornithologist without prejudice to his professional labors.

Among the advertisements for whale oil and the lists of sailing times of the clipper ships in the September, 1841, *Boston Courier*, was an advertisement for a "gentleman naturalist to accompany a gentleman to Yucatán." That gentleman was John L. Stephens, who



Dr. Samuel Cabot, Jr. Photograph taken in 1882, presented to Massachusetts General Hospital Archives by his son, Godfrey Lowell Cabot.

had recently published *Incidents of Travel in Central America* and was returning to Yucatán with the artist, Frederick Catherwood, to search for and record Mayan ruins. Young Cabot was accepted for the post.

The trio sailed for Sisal, Yucatán, from New York on October 9, 1841, aboard the bark, *Tennessee*. They were to spend ten months in the lush jungle, contract malaria, find and describe 44 Mayan ruins, including Tzocchen, Bolonchén, Macobá, Chichén Itzá, Tulum, and Izamal. John L. Stephens described the trip in a delightful book, *Incidents of Travel in Yucatán* (1843), and Frederick Catherwood published a classic lithograph folio, *Views of Ancient Monuments in Central America, Chipas, and Yucatán* (1844).

Yucatán must have been a paradise for young Sam Cabot. The jungle teemed with brightly-colored tropical birds, and the villages with cross-eyed natives. Cabot's collection of birds was the first of any size to come from Yucatán, and he recorded his ornithological discoveries

in an appendix to Stephens' book: *Memorandum for the Ornithology of Yucatán*. Some specimens from this trip are now in the Museum of Comparative Zoology at Harvard.

The large number of cross-eyed natives was doubtless an atavism; in the ancient world of the Maya the deformity was considered attractive. Mayan mothers attached small balls of red-feathered wax between the eyebrows of their newly-born to cause the eyes to cross. So revered was the "squint" among the Maya that Itzama, the god of writing, was always represented as fiercely cross-eyed. Cabot's first operation in Yucatán was described thus by Stephens:

In private intercourse we had spoken of this operation, and in order to make it known and extend its benefits, Doctor Cabot had offered to perform it in Mérida. The Mérida people have generally fine eyes, but . . . there seemed to be more squinting eyes, or *biscos*, as they are called, than are usually seen in any one town, and in Mérida, as in some other places, this is not esteemed a beauty; but, either from want of confidence in a stranger, or a cheap estimation of the qualifications of a medico who asked no pay for his services, the doctor's philanthropic purposes were not appreciated. At least, no one cared to be the first; and as the doctor had no sample of his skill with him, no subject offered.

We had fixed the day for our departure; and the evening but one before, a direct overture was made to the doctor to perform the operation. The subject was a boy . . .

The time was fixed at ten o'clock the next day. After breakfast our *sala* was put in order for the reception of company, and the doctor for the first time looked to his instruments. They were of very fine workmanship, made in Paris . . . The doctor had packed the case among his clothing in the middle of his trunk and had taken every possible precaution, but, as usual upon such occasions, the most important instrument had rusted at the point, and in that state was utterly useless. There was no cutler in the place, nor any other person competent to touch it. Mr. Catherwood, however, brought out an old razor hone, and between them they worked off the rust.

At ten o'clock the doctor's subject made his appearance. He was the son of a widow lady of a very respectable family, about fourteen years old, but small of stature and presenting even to the most casual glance the stamp of a little gentleman. He had large black eyes, but, unluckily, their expression was very much injured by an inward squint. With the high heart of boyhood, however, he seemed indifferent to his personal appearance and came, as he said, because his mother had told him to do so. His handsome person and modest and engaging manners gave us immediately a strong interest in his favor . . .

Our patient remained perfectly quiet, with little hands folded across his breast; but while the

An assistant in psychiatry at HMS and junior associate in psychiatry at the Peter Bent Brigham Hospital, Dr. Gifford holds an M.A. degree in the history of science from Harvard University.

knife was cutting through the muscle, he gave one groan, so piteous and heart-rending that it sent into the next room all who were not immediately employed. But before the sound of the groan had died away, the operation was over, and the boy rose with his eye bleeding but perfectly straight. A bandage was tied over it, and, with a few directions for its treatment, amid the congratulations and praises of all present and wearing the same smile with which he had entered, the little fellow walked off . . .

John L. Stephens and Catherwood had served as operative assistants, and Stephens reported:

The news [of these successes] flew like wildfire, and a great sensation was created throughout the city. All the evening Doctor Cabot was besieged with applications, and I could but think how fleeting is this world's fame! At first my arrival in the country had been fairly trumpeted in the newspapers; for a little while Mr. Catherwood had thrown me in the shade with the Daguerreotype, and now all our glories were swallowed up by Doctor Cabot's cure of strabismus. Nevertheless, his fame was reflected upon us. All the afternoon squint-eyed boys were passing up and down the street, throwing slanting glances in at the door, and toward evening, as Mr. Catherwood and I were walking to the plaza, we were hailed by some vagabond urchins with the obstreperous shout, "There go the men who cure *biscos*."

After returning to Boston Cabot submitted frequent papers on his Yucatán discoveries to the *Journal of the Boston Society of Natural History*. A large portfolio compiled by Cabot in the 1840's is now in the Boston Museum of Science. It contains manuscripts of his various papers, including those on Yucatán birds, unpublished discussions often accompanied by original drawings and letters from prominent ornithologists such as John Bachman, John Cassin, and Spencer F. Baird. His ornithological work was recognized by his election to the Academy of Arts and Sciences, section of zoology and physiology, in 1844.

Sandwich (Cabot's) Tern — *Thalasseus sandvicensis aculeiflavis* (Cabot). Eric Hosking, *National Audubon Society*.



Samuel Cabot, Jr., was visiting surgeon at the Massachusetts General Hospital from 1853 to 1882. During the Civil War he was sent twice on special missions. He served as a volunteer surgeon at Camp Winfield Scott near Yorktown in April and May, 1862. He returned north with a shipload of those wounded at the Battle of Williamsburg, and in 1863, he went as inspector of army hospitals along the Atlantic seaboard. Cabot was nearly sixty when antiseptic methods were introduced; he adopted them enthusiastically and was among the first to use carbolic acid in operations. The apex of his medical career was the performance of the first two successful ovariectomies in Boston. At that time such operations were considered so uncertain that the Massachusetts General Hospital refused permission to allow them to be performed within its walls. On December 6, 1874, assisted by his son, Dr. Arthur Tracy Cabot, Dr. Cabot performed an ovariectomy on Margaret Powers, and she was discharged "well." (Dr. Cabot's patients were not limited to women, of course. Among others he treated Kit Carson, Grizzly Bear Allen, and Buffalo Bill.)

Cabot is remembered also for contributing his valuable library to the Boston Medical Library; sitting on the committee which first admitted women to the Massachusetts Medical Society; and as one of the leaders of the Boston Society for Medical Improvement. He was on the Board of Consultation at the Massachusetts General Hospital until his death in 1885. Two of his sons, Arthur and Samuel, founded at the Massachusetts General Hospital the Samuel Cabot Fund for Pathological Research. Appropriately he is also remembered in ornithology. One of the birds which he collected in Yucatán was a wintering tern, now called the Sandwich Tern, but which retained until recently the vernacular name — Cabot's Tern.

The author acknowledges the assistance of Dr. and Mrs. Stanley Cobb and Mrs. Ralph Bradley. Mrs. Cobb and Mrs. Bradley are granddaughters of Dr. Cabot.

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HARVARD MEDICAL SCHOOL

Internship Appointments

Class of 1963

(Unless otherwise noted, all internships start July 1, 1963, for one year.)

<i>Name</i>	<i>Hospital (and location*)</i>	<i>Service</i>
Adrian, Erle K., Jr.	University of Texas Medical Branch, Galveston, Texas	Anatomy
Aldredge, C. Kay F.	Internship Postponed	
Anderson, W. French	Children's Hospital Medical Center, Boston	Pediatrics
Asher, David M.	King County Hospital, Seattle, Wash.	Medicine
Babineau, G. Raymond	Strong Memorial Hospital, Rochester, N. Y.	Pediatrics
Bart, Jerome B.	Buffalo General Hospital, Buffalo, N. Y.	Mixed
Beck, James C.	Mount Auburn Hospital, Cambridge	Mixed
Behrendt, Douglas M.	Massachusetts General Hospital, Boston	Surgery
Berman, Lawrence J.	Beth Israel Hospital, Boston	Medicine
Bickel, Rudolf G.	Colorado General Hospital, Denver, Colo.	Medicine
Brubaker, Richard F.	Massachusetts General Hospital, Boston	Surgery
Buccino, Robert A.	Boston City Hospital (Harvard Service), Boston	Medicine
Cassarella, William J.	Hospital of The University of Pennsylvania, Philadelphia, Pa.	Rotating
Cassady, James R.	King County Hospital, Seattle, Wash.	Surgery
Clark, Peter F.	University of California Hospital, Los Angeles, Calif.	Surgery
Cobbs, Charles G.	University Hospital and Hillman Clinic, Birmingham, Ala.	Medicine
Coran, Arnold G.	Peter Bent Brigham Hospital, Boston	Surgery
Cowan, Dale H.	Cleveland Metropolitan General Hospital, Cleveland, Ohio	Medicine
Crews, Richard L.	San Francisco General Hospital, San Francisco, Calif.	Rotating
Davis, Faith A. B.	Bronx Municipal Hospital Center, New York, N. Y.	Medicine
Davis, Paul J.	Bronx Municipal Hospital Center, New York, N. Y.	Medicine
DuPont, Robert L., Jr.	Cleveland Metropolitan General Hospital, Cleveland, Ohio	Medicine
Duffy, Frank H.	Grace-New Haven Community Hospital, New Haven, Conn.	Surgery
Dvorak, Harold F.	Massachusetts General Hospital, Boston	Pathology
Ehrenfeld, David W.	University of Florida, Gainesville, Fla.	Biochemistry
Ellis, George J., 3d	Duke Hospital, Durham, N. C.	Medicine
Epstein, Ralph A.	University of California Hospitals, San Francisco, Calif.	Surgery

*Where the name of the state is omitted, the state is Massachusetts.



DAY 1963

<i>Name</i>	<i>Hospital (and location*)</i>	<i>Service</i>
Evans, Francis C., Jr.	Boston City Hospital (Harvard Service), Boston	Surgery
Finstein, Irene F.	Beth Israel Hospital, Boston	Medicine
Foker, John E.	University of Minnesota Hospital, Minneapolis, Minn.	Surgery
Foster, Robert R.	Roosevelt Hospital, New York, N. Y.	Mixed
Franck, Peter T.	University of California Hospital, Los Angeles, Calif.	Medicine
Gelehrter, Thomas D.	Massachusetts General Hospital, Boston	Medicine
Griffin, John M.	Strong Memorial Hospital, Rochester, N. Y.	Surgery
Gritzka, Thomas L.	King County Hospital, Seattle, Wash.	Rotating
Gudeman, Jon E.	University of Chicago Hospitals and Clinics, Chicago, Ill.	Medicine
Gutierrez, Jaime R.	University Hospital, Ann Arbor, Mich.	Surgery
Halpin, Thomas F.	Presbyterian Hospital, New York, N. Y.	Surgery
Haynes, Harley A.	Peter Bent Brigham Hospital, Boston	Medicine
Henderson, Ralph H.	Boston City Hospital (Harvard Service), Boston	Medicine
Hicks, Richard E.	Peter Bent Brigham Hospital, Boston	Surgery
Hill, Curtis L.	University of Oregon Medical School Hospitals and Clinics, Portland, Oregon	Rotating
Howard, Stephen D.	San Francisco General Hospital, San Francisco, Calif.	Rotating
Kates, William W.	Beth Israel Hospital, Boston	Medicine
Keating, James P.	King County Hospital, Seattle, Wash.	Rotating
Keller, Reed T.	University Hospitals of Cleveland, Cleveland, Ohio	Medicine
Keusch, Gerald T.	Buffalo General Hospital, Buffalo, N. Y.	Medicine
Keutmann, Henry T.	New York Hospital, New York, N. Y.	Medicine
Klein, Donald E.	King County Hospital, Seattle, Wash.	Rotating
Klein, Harvey	New York Hospital, New York, N. Y.	Medicine
Lebowitz, Paul	Boston City Hospital (Harvard Service), Boston	Medicine
Lerner, Stephen A.	Peter Bent Brigham Hospital, Boston	Medicine
Lewit, Robert T.	Presbyterian-St. Luke's Hospital, Chicago, Ill.	Mixed
Lindgren, Keith M.	Boston City Hospital (Harvard Service), Boston	Medicine
Lingley, James F.	Boston City Hospital (Harvard Service), Boston	Medicine
Lockshin, Michael D.	Bellevue Hospital (Cornell Service), New York, N. Y.	Medicine
McBride, Kenneth B.	Buffalo General Hospital, Buffalo, N. Y.	Medicine
McDowell, James W.	Buffalo General Hospital, Buffalo, N. Y.	Rotating
Macon, William L., 4th	Strong Memorial Hospital, Rochester, N. Y.	Surgery
Martin, Albert R.	Massachusetts General Hospital, Boston	Medicine
Matthews, Larry S.	University Hospital, Ann Arbor, Mich.	Surgery
Mattson, William J., Jr.	University of Illinois Research and Educational Hospitals, Chicago, Ill.	Rotating
Mendelsohn, John	Peter Bent Brigham Hospital, Boston	Medicine
Molliver, Mark E.	Massachusetts General Hospital, Boston	Pediatrics
Monson, Richard R.	Minneapolis General Hospital, Minneapolis, Minn.	Rotating
Moolten, Frederick L.	Massachusetts General Hospital, Boston	Medicine

<i>Name</i>	<i>Hospital (and location*)</i>	<i>Service</i>
Moore, Gordon T.	Massachusetts General Hospital, Boston	Medicine
Moore, Robert B.	University of Oregon Medical School Hospitals and Clinics, Portland, Oregon	Rotating
Mushinski, J. Frederic	Duke Hospital, Durham, N. C.	Medicine
Nash, Andrea H.	University of California Hospital, Los Angeles, Calif.	Pediatrics
Nash, Gerald	University of California Hospital, Los Angeles, Calif.	Medicine
Nies, Alan S.	King County Hospital, Seattle, Wash.	Medicine
Novy, Miles J.	Massachusetts General Hospital, Boston	Surgery
Ogilvie, James T.	King County Hospital, Seattle, Wash.	Rotating
Okimoto, Joseph T.	King County Hospital, Seattle, Wash.	Rotating
Olson, William H., Jr.	Beth Israel Hospital, Boston	Medicine
Oxman, Michael N.	Boston City Hospital (Harvard Service), Boston	Medicine
Papermaster, David S.	University Hospitals of Cleveland, Cleveland, Ohio	Medicine
Parker, Bruce R.	University of Minnesota Hospital, Minneapolis, Minn.	Medicine
Penza, James F.	Mary Hitchcock Memorial Hospital, Hanover, N. H.	Rotating
Peterson, W. Peter	Peter Bent Brigham Hospital, Boston	Pathology
Philippart, Arvin I.	Peter Bent Brigham Hospital, Boston	Surgery
Philipson, J. Bion, Jr.	Massachusetts General Hospital, Boston	Surgery
Plotz, Paul H.	Beth Israel Hospital, Boston	Medicine
Preven, David W.	University of Minnesota Hospital, Minneapolis, Minn.	Medicine
Prien, Edwin L., Jr.	Grace-New Haven Community Hospital, New Haven, Conn.	Medicine
Rawitscher, Robert E.	University Hospital, Charlottesville, Va.	Surgery
Rayel, Peter A.	University Hospitals of Cleveland, Cleveland, Ohio	Medicine
Reiss, Luce L.	Lenox Hill Hospital, New York, N. Y.	Rotating
Remmers, John E.	Boston City Hospital (Harvard Service), Boston	Medicine
Richardson, John R., Jr.	New York Hospital, New York, N. Y.	Surgery
Riordan, Charles E.	St. Vincent's Hospital of the City of New York, New York, N. Y.	Surgery
Roberts, Donald B.	University Hospital, Seattle, Wash.	Pediatrics
Robertson, Kenneth B.	Minneapolis General Hospital, Minneapolis, Minn.	Rotating
Rockenmacher, Sol	Boston City Hospital (Harvard Service), Boston	Medicine
Rosen, David L.	Beth Israel Hospital, Boston	Medicine
Rozett, Ronald T.	Beth Israel Hospital, Boston	Medicine
Rutman, Joel	Massachusetts General Hospital, Boston	Pediatrics
Sachar, David B.	Beth Israel Hospital, Boston	Medicine
Sampson, Richard J.	University of California Hospital, Los Angeles, Calif.	Pathology
Sanders, Jay H.	Massachusetts General Hospital, Boston	Medicine
Saphir, J. Robin	Buffalo General Hospital, Buffalo, N. Y.	Medicine
Savitz, David	Beth Israel Hospital, Boston	Medicine
Shore, Neil S.	Boston City Hospital (Harvard Service), Boston	Medicine
Simpson, Robert T.	Peter Bent Brigham Hospital, Boston	Medicine
Sisson, Warden B.	Presbyterian-St. Luke's Hospital, Chicago, Ill.	Mixed
Smith, Stephen R.	University Hospital, Ann Arbor, Mich.	Rotating
Snodgrass, Samuel R.	Massachusetts General Hospital, Boston	Medicine
Speidel, John J.	St. Luke's Hospital, New York, N. Y.	Mixed
Stagg, Arthur R., Jr.	Los Angeles County General Hospital, Los Angeles, Calif.	Rotating
Steele, Robert E., Jr.	Massachusetts General Hospital, Boston	Surgery
Stocker, William A.	Mary Hitchcock Memorial Hospital, Hanover, N. H.	Rotating
Swenson, David D.	King County Hospital, Seattle, Wash.	Rotating
Tihen, William S.	University of Kansas Medical Center, Kansas City, Kan.	Pathology
Tomlinson, Jerry A.	Beth Israel Hospital, Boston	Pathology
Towle, Murray A.	Philadelphia General Hospital, Philadelphia, Pa.	Rotating
Troost, Bradley T.	Colorado General Hospital, Denver, Colo.	Medicine
Turkington, Roger W.	Duke Hospital, Durham, N. C.	Medicine
Uahwatanasakul, Yong	Newton-Wellesley Hospital, Newton	Rotating
Vermillion, C. Dale	Massachusetts General Hospital, Boston	Surgery
Vineyard, Gordon C.	Peter Bent Brigham Hospital, Boston	Surgery
Virmelli, Frank R.	Minneapolis General Hospital, Minneapolis, Minn.	Rotating
Warshaw, Andrew L.	Massachusetts General Hospital, Boston	Surgery
Whitlow, Dennis R.	Massachusetts General Hospital, Boston	Surgery
Williams, Gordon H.	University of Chicago Hospitals and Clinics, Chicago, Ill.	Medicine
Wilson, Norman L., Jr.	Presbyterian-St. Luke's Hospital, Chicago, Ill.	Medicine
Winter, William G., Jr.	Colorado General Hospital, Denver, Colo.	Surgery
Wolf, Katharine C. P.	Boston City Hospital (Boston University Service), Boston	Pediatrics
Wolf, Marshall A.	Peter Bent Brigham Hospital, Boston	Medicine
Zimmerman, Theodore S.	University of Minnesota Hospital, Minneapolis, Minn.	Medicine
Zinner, John	Beth Israel Hospital, Boston	Medicine



*... faces of discovery
and promise ...*

A Journey to Nabeganj

O. Ross McIntyre '57

IN NOVEMBER OF 1961 the author, then in the clinical research section of the Pakistan SEATO Cholera Research Laboratory, Dacca, East Pakistan, was a member of a team sent by the laboratory to investigate a cholera epidemic in Nabeganj. The object of the visit was to establish the diagnosis of the disease and to document an epidemic as it occurred in this small town. Readers will be interested to know that a group headed by Robert S. Gordon '49 and including William B. Greenough '57 and Irwin H. Rosenberg '59 is investigating clinical aspects of cholera at the laboratory. This group is studying host resistance, transmission, nutritional aspects and abnormal physiology in the disease. A hospital ward for the care of cholera patients was opened at the laboratory in November of 1962 and has greatly facilitated this research.



WASEQ, a bacteriology technician, Neogi, a chemistry technician, Aziz and Akef, two sociologists training as epidemiologists, Asabur, our driver, and I, sat in the office of the Secretary of the Narayanganj Municipality, drinking tea with this busy man, whose thin face supported a pair of sunglasses even in the dimness of the office. His hand went out from time to time to pick up the phone which rang at his elbow; the receiver emitted the screeching and crackles characteristic of a tropical telephone. At intervals letters and numerous carbon copies were brought to him for his hurried signature. The reasons for the Secretary's urgency and for our visit were one and the same. Within the municipality, directly across the river in Nabeganj, seventeen persons had died from cholera in the last two weeks.

IN THE EARLY 19TH CENTURY cholera spread from the Indian subcontinent along trade and pilgrimage routes, reaching the Middle East, the Balkans, Russia,

and eventually all of Europe. In Europe large-scale troop movements occasioned by the wars of this era helped to disseminate the disease. In 1832 it arrived in the New World, invading first Quebec, then New York and Philadelphia. In six pandemics between the years of 1817 and 1925 cholera killed millions of people. It claimed lives in cities as far-flung as Archangel on the White Sea and the roaring gold mine towns of the U. S. frontier.

During this time the London epidemic provoked the studies of John Snow, whose concern about the 500 fatal cases which occurred in ten days in the vicinity "of the spot where Cambridge Street joined Broad Street" caused him to trace the origin of his cases to the now famous Broad Street pump. His postulation of a transmissible agent as the cause of the disease was confirmed by the findings of Robert Koch who, in 1884, demonstrated the causative organism while studying the epidemic in Egypt. Of equal importance were the efforts begun at this time to establish international quarantine procedures, efforts which have culminated in the foundation of the World Health Organization.

The recurring pandemics disappeared as more effective public health measures, improved sanitation and water supplies, and a generally higher standard of living, developed throughout much of the world. In recent years the disease has been confined to sporadic epidemics in Asia, save for 1947, when it invaded the Nile valley. The most recent epidemics have occurred in Bangkok (1958 and 1959); Hong Kong (1961); and the Philippines (1961 and 1962). The disease persists, however, in an endemic form in the delta area at the head of the Bay of Bengal, causing thousands of deaths each year.

On this broad delta two of the world's major rivers, the Ganges and the Brahmaputra, converge and flow through meandering channels to the sea. The hills to the north of the delta have the highest rainfall in the world (800 inches having been recorded during one year) and from these hills numerous rivers of shorter length contribute their load to the main channels. The rise of the rivers during the summer monsoons inundates vast areas of the low delta land; currents often six miles per hour in the major streams eat away the unstable banks and frequently devour towns, bridges, and

roads. The total absence of rock or gravel in the lower delta poses problems for those who wish to construct embankments, roads or dams. Most of the houses in the area are built on artificially raised land, excavated from one area and heaped nearby. The resulting depression, called a "tank," fills during the wet season and furnishes water for bathing, cooking, and drinking, for much of the population. As one flies over the country in the dry season these tanks stand out like thousands of swimming pools. Unfortunately the population, averaging 1000 per square mile, overburdens the biological cycles responsible for elimination of human pathogens, and the scientist hesitates to swim, despite the shimmering heat and the sight of small boys sporting in the water.

The area has long been suspected as the site from which epidemic cholera spreads to affect other lands. Although public health officials in the region expend considerable effort in attempts to control the disease, they are hampered because the geography of the country hinders communication and the populace lacks education in basic principles of hygiene and sanitation. Moreover, though the etiologic agent responsible for cholera has been known for over 75 years, there is little worthwhile scientific knowledge concerning such factors as host resistance and development of immunity in those afflicted. The means by which it is transmitted is not entirely clear, but contaminated water undoubtedly plays a role.

Formerly with the Clinical Research Section, Pakistan-SEATO Cholera Research Laboratory, Dacca, East Pakistan, Dr. McIntyre is now with the Division of Biologics Standards, National Institutes of Health, Bethesda, Md.

This faith healer of Nabeganj poses in front of his household altar. The spiritual power of the pictured objects was insufficient to prevent his own child from developing cholera.

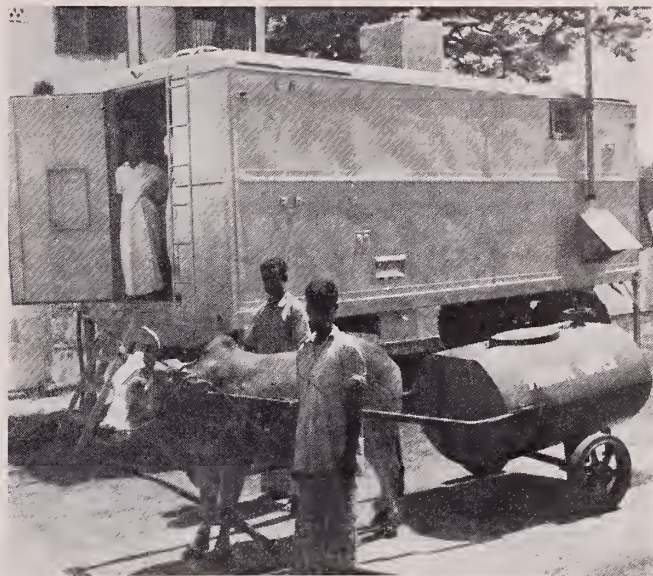


THE PAKISTAN-SEATO CHOLERA RESEARCH LABORATORY was established at the Institute of Public Health, Dacca, East Pakistan, in December of 1960, and is charged with performing studies which will eliminate these problems.

After leaving the office, the six of us, the Secretary of the Municipality, and several other local officials, crossed the Lakhya River in a country boat to visit Nabeganj. I had scarcely had my fill of the river's wide reach when we arrived at the temporary bamboo jetty which, now that the dry season was upon us, snaked down from the brick steps which are used as a landing place during the wet season when the water is fifteen or more feet higher. On either side of us the often-cursed water hyacinths, stranded by receding water, managed to send forth beautiful lavender blossoms. Along the waterfront were the jute mills and warehouses of the town, their clerestory windows presenting a saw-like pattern in the morning sky. Behind the mills lay the town — 20,000 people living in a maze of plaited bamboo walls and corrugated tin roofs. Immediately we were greeted by the smell of chlorine arising from the freshly-sprinkled bleaching powder in each ditch and wet spot.

As we walked down the narrow brick road, it was necessary to return so many "Salaams" from the townspeople that I began to feel like a candidate for political office. Between raising my right hand in the salute, the traditional Moslem greeting, and uttering my "Salaam," I listened to the sanitary officer. He pointed out one or two one-half-inch galvanized iron pipes rising from the ground and devoid of valves at their ends. These were the hydrants from which the townspeople draw their drinking water. I noticed that each of the brick and concrete slabs through which the pipes rose was covered with clay water jars. No water was flowing. It was explained that each day the vintage 1900 municipal pumps of Nabeganj forced 10,000 gallons of water into the mains. To supplement this half-gallon per person average, wells had been sunk to a sandy stratum which lies 200 to 300 feet below the town. In spite of the wells, capped with simple hand pumps, there is an insufficient supply of water, and many people, bowing to the custom of centuries, drink the river water.

We turned north and went by smaller paths to visit the most recent victim of the disease. Six small huts and a few yards of bamboo fence formed the walls of a courtyard, isolating the mud-floored enclosure from the street. The largest house was perhaps ten by eighteen feet; most were considerably smaller. The greater part of each house was occupied by the raised wooden bed which provided a platform twelve to eighteen inches above the clay floor. On it straw mats were spread for sleeping. It was on such a platform in the first house of the circle that one of the latest cases of cholera lay — a girl of about five years. She had taken ill about twelve hours earlier, developing profuse vomiting and painless diarrhea, with passage of the opalescent watery stools devoid of fecal material — termed ricewater stools



The mobile laboratory, shown with a bullock cart that has come to fill the roof-top water tank.

by physicians the world over. Although her skin and tongue were dry, and hollows were beginning to appear about the girl's eyes, there were, as yet, no signs of vascular collapse, the usual cause of death in this disease. Nevertheless, the fact that the child had not yet gone into the coma of shock was not particularly encouraging. It is safe to say that about 50 to 80 per cent of these untreated cholera patients will die of the disease.

We stood outside in a group, surveying the surroundings. Beneath our feet was the moist but not slippery clay, beaten by bare feet to the consistency of bituminous paving. Waseq poured water from the family's water jar into a plastic graduate before adding it to the culture media. Some of it spilled and collected in a shallow depression, remaining there, not mixing with the damp clay beneath it.

From this group of houses a path led into a nearby thicket of low bushes. The latrines were there — usually a bamboo platform, four legs to raise the affair off the ground, a few bamboo screens to imperfectly shield the structure from the scrutiny of the passerby. Four of them were placed in such a position as to drain into a shallow man-made depression without an outlet. The fifth house had its "paekhana" attached, the effluent being conducted to the same depression by a simple clay ditch. The whole area had been sprinkled with bleaching powder.

I tried to visualize this area during the monsoon when the depression would be brimming with water, unable to receive but a fraction of the water which would fall each day. The land sloped almost imperceptibly northward for another 100 yards or so, where it fell abruptly to the canal or "khal" about 15 feet below. During the wet season this khal is navigable to the Brahmaputra River three miles away. Now there were only pools left behind by the receding water. Why was it, now that the khal was dry and the excrement

was no longer spread by flowing water, that cholera appeared again after six months of rest? Some suggest that it is caused by the rice harvest, the unsanitary conditions under which rice cakes are made and consumed. The simple man holds that it is devil's work, and in the present state of our knowledge, he is on as firm ground as the man with a more intricate answer.

AFTER LOOKING AT THE KHAL and collecting water samples from its mouth where people were bathing, filling jars with water for cooking and washing their clothes, we went on. I wondered why, in deference to the epidemic, the people did not at least move their activities to the bank of the main river and out of sight of the only real sewer pipe I saw in the town.

By now the officials from the municipality had returned to their duties, and we were a smaller group. Our plan was to obtain bacteriological confirmation of as many cases as possible and to obtain cultures from asymptomatic individuals in the same household. We saw twelve cases, and there were reputed to be eight more in nearby houses. All of these were within an area of about one-quarter mile diameter with an imperfectly estimated population of 6,000. This, including the number of known dead, gives an incidence of 0.6%. The figure is probably not accurate, for it seemed, as we walked through the area, that for every 20 houses there was one dead and at least one sick.

Most of the afflicted we visited were children, though a few young women and one young man were seen. All lay silently and without apprehension as they were spoken to. Their apathy contrasted sharply with the fear the individuals caring for them showed in their every movement. One young boy was gradually recovering from shock and was drinking a small amount of fluid and retaining it, but he was anuric. While in coma he had developed corneal ulcerations which will blind him if indeed he does survive.

Time after time I was asked for medicine, and time after time I had to say that the only medicine was in the hospital 12 miles away, that we could not give good medicine here. I was shown several children who had received minute amounts of "glucose" subcutaneously. The father of one nearly dead child held out a bottle of chloramphenicol palmitate suspension which he had obtained somewhere and which he had been unable to administer because the child would not swallow. Had he carried his child to the hospital, there would have been some hope. Fatalities due to cholera in a local hospital average about 10-20% of those admitted with the disease, far more than is usual under the best of conditions, but still better than the results of untreated cases in the village. It is generally believed, nevertheless, that to go to a hospital with the disease is to admit that death is inevitable. Again and again I wished that

it were possible to perform adequate therapy in the village where the disease was rampant; and I was convinced by the weeping parents that the loss of a child here, even though it happens with much greater frequency than in the U. S., is not a less painful experience.

It was hard to leave the village without contributing anything more. The village officials thanked us profusely, for a visit by a team of outsiders with the high municipal officers means that interest is being taken in the problem. Our large water bottles and case of culture jars and petri dishes made an impressive sight, and morale may have been elevated somewhat. (Imagine the morale of a U. S. city in which a certain area was suddenly attacked by a disease which produced a fatality per block.) Our small amount of scientific equipment could not, of course, replace the morale-building power of properly administered saline.

THE REAL ANSWER TO THE PROBLEM lies in the understanding of the disease. This answer will eventually be provided by the innumerable water samples, rectal swabs, statistical, nutritional, clinical and meteorological data, and many other pieces of information that the cholera lab will collect. Sometime in the future suitable explanations for what we now observe will be forthcoming; until that time the studies on the basic nature of the disease are equally as important as patient care.

These studies are now beginning to take form at the Cholera Research Laboratory. For two years diagnostic and investigative bacteriological work has been carried out. A section for the study of water supplies has been performing bacteriological and chemical studies on water samples on a routine basis and has begun a study of the seasonal fluctuations which occur in local tanks and rivers. The epidemiology section is now laying the groundwork for a field trial of cholera vaccine. The last sections to become fully operative consist of a section which will do clinical research and a hospital ward to furnish clinical material for this section.

A training program to be operated in conjunction with the clinical facilities will educate physicians from Pakistan and other countries in modern concepts of fluid therapy. When applied to cholera, parenteral fluid therapy, regulated by simple laboratory tests such as plasma specific gravity, reduces the fatality rate to almost zero. Presumably, graduates of this program will be successful in providing improved care at the local level. To help care for the victims in towns outside the Dacca area, such as Nabeganj, the laboratory has converted a surplus U. S. Navy aircraft guidance trailer into a mobile lab. It is hoped, however, that the effect of the Cholera Research Laboratory will be felt in areas far beyond the reach of the mobile lab, as knowledge gained in Dacca and in other labs enables man to force one more infectious disease into submission.

HONORS

Eric G. Ball, Edward S. Wood Professor of Biological Chemistry at the Harvard Medical School, is on sabbatical leave for six months. Dr. Ball left February 1, 1963, and will spend the first four months of his leave at the Scripps Metabolic Clinic in La Jolla, Calif., where he will pursue his interest in the action of insulin and other hormones on adipose tissue, under a fellowship from the Guggenheim Foundation. The remainder of his sabbatical leave will be spent at the Marine Biological Station in Woods Hole, Mass.

chemical compounds for the treatment of leukemia and other forms of widespread cancer.

I. Herbert Scheinberg '43B, professor and acting chairman of the department of medicine at Albert Einstein College of Medicine, has been named to the National Medical Advisory Board of the National Foundation for Neuromuscular Diseases, Inc. The volunteer advisory group directs the Foundation's medical policies and makes recommendations for its sponsorship of research projects through professorship grants, program grants, and interim emergency grants.



Dr. Farber

On November 14, 1962, four Francis Amory prizes, totaling \$24,000, were awarded by the American Academy of Arts and Sciences in Boston to four groups of doctors in recognition of four major accomplishments in the past seven years in the treatment of diseases affecting the genito-urinary system. Two of these groups are from the Peter Bent Brigham Hospital and include J. Hartwell Harrison, David M. Hume, and Joseph E. Murray '43B; and John P. Merrill '42, Benjamin F. Miller '33, and George W. Thorn — all noted for their work with kidney transplantation. A member of one of the other groups — recognized for its studies of renal ischemia and hypertension — is Eugene F. Poutasse '43B who is at the Cleveland Clinic.

Frederick C. Robbins '40, professor of pediatrics at Western Reserve University and director of pediatrics and contagious diseases at Cleveland Metropolitan General Hospital, was recently awarded a Distinguished Achievement Award for research in immunology and epidemiology, particularly in children's diseases, and his application of tissue culture methods to the study of virus infections. The awards are presented annually by the editors of *Modern Medicine* to medical leaders (10 in 1962) for contributions directly influencing current medical practice and thought.



Dr. Scheinberg

On January 13, 1963, Paul D. White '11 was the third recipient of the Albert Schweitzer Medal, which was commissioned in 1961. Dr. and Mrs. White were joined by some of Dr. White's colleagues at the presentation and supper which followed the annual meeting of the Committee for the Friends of Albert Schweitzer.

Twenty-five young American and Canadian medical scientists recently received the Markle Scholar in Academic Medicine appointment from the John and Mary R. Markle Foundation of New York. Four of these received their M.D. degree from Harvard Medical School: W. Gerald Austen '55, Arther E. Baue and William E. Lasister '54, and Walter E. Nance '58.



Dr. Ball

George P. Berry, Dean of the Faculty of Medicine, was recently presented with an Award of Commendation by the chief medical director of the Veterans' Administration, "in warm acknowledgement of conspicuous advocacy of the cause of superior veteran medicine" and for his services as advisor to the New England staff of the Veterans' Administration.

Sidney Farber '27 has been appointed director of the Charles A. and Eleanor N. Dana Laboratories which were dedicated November 30, 1962, at the Children's Cancer Research Foundation, Boston. Located on the fifth floor of the Jimmy Fund Building, the new laboratories are devoted to the discovery and production of new

ALUMNI NOTES

1900

Irving R. Bancroft was given a party on his birthday at Carmel, Calif., by his descendants.

1903

Edward M. Halligan writes, "How about some news of the remaining members of this class? I am still going strong in general practice."

Walter L. Sargent retired from all medical practice two years ago.

1906

Jerome S. Leopold has recently been honored by the establishment of a lecture-ship bearing his name at Lenox Hill Hospital in New York City.

1909

"There is little to add to my last note," writes F. Gorham Brigham, "except that I go downhill slowly, and I am confined to my room. I do enjoy a large correspondence, and I would enjoy hearing from any of you. I send all good wishes . . . Ed Young is doing a superb job for our class."

1911

"No news is all good!" writes Ernest P. Bagg.

1913

DeWitt S. Clark is "still single, still practicing, but not so assiduously."

1914

Carl A. L. Binger "recently gave the first of a series of endowed lectures to the department of psychiatry and others at the University of Buffalo Medical School."

Austin W. Cheever is "back again in the practice of dermatology . . . Honolulu, Hawaii, and enjoying every minute of it. The spring-like weather all the year, the wonderful scenery, the mixture of peoples of many sorts all living happily together, make Hawaii truly the Paradise of the Pacific. I hope that any HMS men coming to Hawaii will look me up."

1915

William E. Hunter has "been away from Los Angeles for three or four months and will be in Europe most of 1963."

1918

Claudius A. Street reports, "Good health; good practice — still full-time pediatrics. Nine grandchildren — all beautiful, brilliant, and fun!"

1919

Edward W. Wilder was honored last fall by the addition of a new building bearing his name to the Christian Mission Hospital in Madurai, South India, where he served 25 years — until 1946, when he became secretary of the Christian Medical Association of India. Dr. Wilder is now retired.

1920

Sidney C. Wiggin announces the birth of a grandson, Thomas Hunter Wiggin, January, 1963, and reports that for the past six years since retiring to Duxbury he has kept busy as a consultant in anesthesia at several local hospitals, as school physician to the Duxbury Schools, and as member of several service organizations. Dr. Wiggin would like to hear news of others in the class.

1921

C. Byron Blaisdell "attended the World Medical Association's 16th General Assembly in New Delhi, India, last November, and the three weeks preceding it in Russia. Our group of eight doctors was there during Cuban crisis — uneasy days! — especially when deep in Uzbekistan and Georgian Soviets, far from 'escape hatches.' Visited briefly with Ed Chapman in Colorado on way home from Japan. He is fine, also interested in the '21 Memorial Fund. Let's give it a boost."

Jean A. Curran writes that he is "continuing to enjoy life as a full-time senior consultant to the Bingham Associates Fund." Dr. and Mrs. Curran are taking a trip to Korea during March and April of this year.

James H. Townsend is currently a physician to the medical department of MIT. During the past summer he and Mrs. Townsend visited England, France, and West Germany as members of the MIT Choral Society.

Philip D. Woodbridge is chairman of the section for anesthesiology of the AMA for 1963. Dr. and Mrs. Woodbridge are taking an automobile trip through Europe this spring.

1922

Joseph Goldman writes that he plans "to visit some of the Eastern European and Near East medical centers on my next trip. Similar experiences in the past have been very enlightening."

On December 13, 1962, the presentation of a portrait of Grantly W. Taylor took place in the Warren Lobby of the Massachusetts General Hospital.

1923

Lewis M. Hurxthal, staff member of the Lahey Clinic since 1927, retired from active practice as of December 31, 1962. He will devote his time to research in bone and thyroid diseases under grants from the U. S. Department of Public Health and the Lahey Foundation. He is particularly interested in continuing his studies in osteoporosis.

1925

Richard S. Buker is currently employed by the American Leprosy Mission, Inc.; he has given ten courses on the management of leprosy to laymen and paramedical personnel in Africa and Asia during the past year and is now expanding the leprosy control program in Khonkaen, Thailand, to include a hospital for the treatment of the deformities common in this disease.

1926

Valmore A. Pelletier, chief of surgery, Norwood Hospital, reports "four children; four grandchildren; son graduates from Albany Medical next year (1963)."

1927

Howard B. Hunt has been elected to the board of directors of the American Cancer Society, to serve through 1964.

John Scudder is now "associate professor of surgery in an anomalous status of doing no surgery. Am interested in the gas phase of blood preservation. If proved in identical twins, will mean better quality and longer outdating."

1928

Walter W. Boyd "spent May in Switzerland, much of it with an old PBBH colleague, Dr. Gaston Decoppet, Chef de Clinique, Viktoriaspital, Berne, who sent his best wishes to his many Harvard and Brigham friends . . ."

Robert A. Goodell reports that his son, Robert A., Jr., '56, is "enjoying practice of pediatrics with Williamstown Medical Associates, Williamstown, Mass."

E. Henry Keutmann writes that "son, Henry T., will receive M.D. at HMS, June, 1963 (I hope)."

1929

John A. Isherwood writes that "this first year of 'retired' life has been as busy as any professionally. Am still in active practice of radiology, spending most of my time at the Santa Rosa Medical Center,

